CITY OF GRAND ISLAND

Working Together for a
Better Tomorrow. Today.

SPECIFICATION PACKAGE

for

VIBRATION MONITORING UPGRADES

Bid Opening Date/Time
WEDNESDAY, MAY 29, 2013 @ 2:00 P.M. (local time)
City of Grand Island, City Hall
100 East 1st Street, P.O. Box 1968
Grand Island, NE 68802-1968

Contact
City of Grand Island – Utilities Department
Platte Generating Station
308/385-5496

Date issued: May 9, 2013

ADVERTISEMENT TO BIDDERS
FOR
VIBRATION MONITORING UPGRADES
FOR
CITY OF GRAND ISLAND, NEBRASKA

Sealed bids will be received at the office of the City Clerk, 100 E. First Street, P.O. Box 1968, Grand Island, Nebraska 68802, until WEDNESDAY, MAY 29, 2013 at 2:00 p.m. local time for Vibration Monitoring Upgrades, FOB the City of Grand Island, freight prepaid. Bids will be publicly opened at this time in the Grand Island City Hall Council Conference Room #1 located on 1st floor of City Hall. Submit an original and three copies. Bid proposal package and any Addendas are also available on-line at www.grand-island.com under Business-Bid Calendars. Bids received after the specified time will be returned unopened to sender.

The successful bidder will be required to comply with fair labor standards as required by Nebraska R.R.S.73-102 and comply with Nebraska R.R.S. 48-657 pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. Successful bidder shall maintain a drug free workplace policy. Every public contractor and his, her or its subcontractors who are awarded a contract by the City for the physical performance of services within the State of Nebraska shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska.

Each bidder shall submit with the bid a certified check, a cashiers check, or bid bond payable to the City Treasurer in an amount no less than five percent (5%) of the bid price which shall guarantee good faith on the part of the bidder and the entering into a contract within fourteen (14) days at the bid price if accepted by the City. **Your certified check, cashier's check or bid bond must be submitted in a separate envelope attached to the outside of the envelope containing the bid. Each envelope must be clearly marked indicating its contents. Failure to submit the necessary qualifying information in clearly marked and separate envelopes will result in your bid not being opened or considered.** Only surety companies authorized to do business in the State of Nebraska may issue bid bonds.

Bids will be evaluated by the Purchaser based on price, schedule, quality, adherence to schedule, plan and specifications, economy and efficiency of operation, experience and reputation of the bidder, ability, capacity, and skill of the bidder to perform contract required and adaptability of the particular items to the specific use intended.

The Purchaser reserves the right to reject any or all bids, to waive irregularities therein, and to accept whichever bid that may be in the best interest of the City, at its sole discretion.

No bidder may withdraw his/her bid for a period of thirty (30) days after date of bid opening.

RaNae Edwards, City Clerk

Advertised
Grand Island Independent

(All bids must be submitted on this form)

VIBRATION MONITORING UPGRADES
BID DATA FORM

CITY OF GRAND ISLAND
GRAND ISLAND, NE

The undersigned Bidder, having examined all specifications and other bidding documents, and all addenda thereto, and being acquainted with and fully understanding all conditions relative to the specified materials and equipment, hereby proposes to provide such equipment FOB the City of Grand Island, freight prepaid, at the following price:

ITEM DESCRIPTION	EXTENDED COST
Base Bid:	
Material	$ _____
Labor	_____
Applicable Sales tax*	_____
Total Base Bid	**$** _____
Alternate bid-Optimizing Diagnostic Software	$ _____

*** If bidder fails to include sales tax in their bid price or takes exception to including sales tax in their bid price, the City will add a 7.0% figure to the bid price for evaluation purposes; however, the City will only pay actual sales tax due.**

☐ By checking this box, Bidder acknowledges that Addenda Number(s) _____ were received and considered in Bid preparation.

☐ By checking this box, Bidder acknowledges the specified completion date of the project is **October 10, 2013.**

According to Nebraska Sales and Use Tax Requirements, Section 1-017, Contractors, check which option you have selected to file with the Nebraska Department of Revenue:

Nebraska law provides a sales and use tax exemption on contractor labor charges for the construction, repair, or annexation of any structure used for the generation, transmission, or distribution of electricity. Separately stated contractor labor would be exempt, all materials are taxable according to the contractor's option.

Option 1 (Section 1-017.05)_____ Option 2 (Section 1-017.06)_____ Option 3 (Section 1-017.07)_____

If the Nebraska sales and use tax election is not filed or noted above, the contractor will be treated as a retailer under Option 1 for sales and use tax purposes.

_____
Bidder Company Name Date

_____
Company Address City State Zip

_____
Print Name of Person Completing Bid Signature

Telephone No._____ Fax No._____

☐ By checking this box, Bidder acknowledges there are Exceptions noted to the bid.
NOTE: Any exceptions to specifications must be fully explained on a separate sheet attached to bid.

CHECKLIST FOR BID SUBMISSION

FOR

VIBRATION MONITORING UPGRADES

Bids must be received by the City Clerk before *2:00 p.m. on Wednesday, May 29, 2013.*

The following items must be completed for your bid to be considered.

- ❑ A signed original and three copies of the bidding documents.
- ❑ A reference list of at least three projects of similar scope and complexity.
- ❑ A proposed schedule, including an estimate of the number of hours and the number of employees required to perform the work.
- ❑ Firm lump sum pricing; firm unit pricing in case adjustments are necessary, and breakout of sales tax pricing.
- ❑ Provide an hourly rate sheet in the event that additional work is required while on-site.
- ❑ Provide an itemized cost for all spare parts including: I/O modules, monitors, and power supplies. Items selected by the City for purchase will be delivered by the time installation is complete.
- ❑ Include a list of optional training services available to City employees pertaining to diagnostic configuration and analyzing summary of the experience of the service supervisor proposed for this project.
- ❑ Selection of Nebraska Sales Tax Option.
- ❑ Acknowledgment of Addenda Number(s) _____.
- ❑ Bidders must complete and sign the Bid Data Form provided in these Documents. All blank spaces must be filled in. Bidders shall acknowledge receipt of any Addenda information on the Bid Data Form. Labor and Materials must be listed separately on the Bid Data Form.
- ❑ A certified check, cashiers check or bid bond in a separate envelope attached to the **outside of the envelope containing the bid**. Each envelope must be clearly marked indicating its contents. Failure to submit the necessary qualifying information in clearly marked and separate envelopes will result in your bid not being opened.

Please check off each item as completed.

_____ _____

Company Signature

Telephone No. _____ Fax No. _____

INSTRUCTIONS TO BIDDERS

1. GENERAL INFORMATION.

   The following instructions outline the procedure for preparing and submitting Bids. Bidders must fulfill all requirements as specified in these Documents.

2. TYPE OF BID.

   Bidders shall be required to submit prices for all items listed in the Bid Data Form.

3. PREPARATION OF BIDS.

   Bidders shall use only the Bid Data Form provided in these Documents. All blank spaces in the Bid Data Form must be filled in, preferably in BLACK ink, in both words and figures where required. No changes to the wording or content of the forms is permitted. Written amounts shall govern in case of discrepancy between the amounts stated in writing and the amounts stated in figures.

   Prices stated shall be f.o.b. with freight and full insurance paid by Bidder, to the job site located in Grand Island, Nebraska.

   The Bidder shall acknowledge receipt of all Addenda in the Bid Data Form. Bids received without acknowledgement or without the Addendum enclosed will be considered informal.

4. SUBMISSION OF BIDS.

   All Bids must be submitted intact no later than the time prescribed, at the place, and in the manner set forth in the ADVERTISEMENT FOR BIDS. Bids must be made on the Bid Data Form provided herein. Each Bid must be submitted intact in a sealed envelope, so marked as to indicate its contents without being opened, and delivered in person or addressed and mailed in conformance with the instructions in the ADVERTISEMENT FOR BIDS.

5. BID SECURITY.

   Bids must be accompanied by cash, a certified check, or cashier's check drawn on a bank which is insured by the Federal Deposit Insurance Corporation, or a bid bond issued by a Surety authorized to issue such bonds in the state where the Work is located, in the amount of 5 percent of the bid amount payable to OWNER. This bid security shall be given as a guarantee that the Bidder will not withdraw their Bid for a period of thirty (30) days after bid opening, and that if awarded the Contract, the successful Bidder will execute the attached Contract and furnish a properly executed Performance Bond and Payment Bond, each in the full amount of the Contract price, within the time specified.

   The Attorney-in-Fact that executes this bond on behalf of the Surety must attach a notarized copy of his/her power of attorney as evidence of his/her authority to bind the Surety on the date of execution of the bond. Where State Statue requires, certification by a resident agent shall also be provided.

6. RETURN OF BID SECURITY.

   Within fifteen (15) days after the award of the Contract, the OWNER will return the bid securities to all Bidders whose Bids are not to be further considered in awarding the Contract. All other retained bid securities will be held until the Contract has been finally executed, after which all bid securities, other than Bidders' bonds and guarantees which have been fortified, will be returned to the respective Bidders whose Bids they accompanied.

7. BASIS OF AWARD.

   The award will be made by the OWNER on the basis of the Bid from the lowest responsive, responsible Bidder which, in the OWNER's sole and absolute judgment will best serve the interest of the OWNER. All Bids will be considered on the following basis:

Conformance with the terms of the Bid Documents.	Bid price. Cost of installation.

Suitability to project requirements.
Delivery time.
Responsibility and qualification of Bidder.

The OWNER reserves the right to reject all Bids, or any Bid not in conformance with the intent of the Bid Documents, and to waive any informalities and irregularities in said Bids.

8. EXECUTION OF CONTRACT.

The successful Bidder shall, within fifteen (15) days after receiving notice of award, sign and deliver to the OWNER the Contract hereto attached together with the acceptable bonds as required in these Bid Documents. Within fifteen (15) days after receiving the signed Contract with acceptable bond(s) from the successful Bidder, the OWNER's authorized agent will sign the Contract. Signature by both parties constitutes execution of the Contract.

9. PERFORMANCE AND PAYMENT BONDS.

The successful Bidder shall file with the OWNER Performance and Payment Bonds in the full amount (100 percent) of the Contract price, as security for the faithful performance of the Contract and the payment of all persons supplying labor and materials for the Work under this Contract, and to cover all guarantees against defective workmanship or materials, or both, for a period of one (1) year after the date of final acceptance of the Work by the OWNER. The Surety furnishing these bonds shall have a record of service satisfactory to the OWNER, be authorized to do business in the State where the OWNER's project is located and shall be named on the current list of approved Surety Companies, acceptable on Federal bonds as published by the Audit Staff, Bureau of Accounts, U.S. Treasury Department.

The Attorney-in-Fact (Resident Agent) who executes these bonds on behalf of the Surety must attach a notarized copy of his/her power-of-attorney as evidence of his/her authority to bind the Surety on the date of execution of the bond.

10. TIME OF COMPLETION.

The time of completion of the Work to be performed under this Contract is the essence of the Contract. The time allowed for the completion of the Work is stated in the Bid Data Form.

11. GRATUITIES AND KICKBACKS.

City Code states that it is unethical for any person to offer, give, or agree to give any City employee or former City employee, or for any City employee or former City employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefor. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.

12. FISCAL YEAR.

The City of Grand Island, Nebraska operates on a fiscal year beginning October 1st and ending on the following September 30th. It is understood and agreed that any portion of this agreement which will be performed in a future fiscal year is contingent upon the City Council adopting budget statements and appropriations sufficient to fund such performance.

CONTRACT AGREEMENT

THIS AGREEMENT made and entered into by and between **[SUCCESSFUL BIDDER]**, hereinafter called the Contractor, and the **CITY OF GRAND ISLAND, NEBRASKA**, hereinafter called the City.

WITNESSETH:

THAT, WHEREAS, in accordance with law, the City has caused contract documents to be prepared and an advertisement calling for bids to be published for *VIBRATION MONITORING UPGRADES;* and

WHEREAS, the City, in the manner prescribed by law, has publicly opened, examined, and canvassed the bids submitted, and has determined the aforesaid Contractor to be the lowest responsive and responsible bidder, and has duly awarded to said Contractor a contract therefore, for the sum or sums named in the Contractor's bid, a copy thereof being attached to and made a part of this Contract;

NOW, THEREFORE, in consideration of the compensation to be paid to the Contractor and of the mutual agreements herein contained, the parties have agreed and hereby agree, the City for itself and its successors, and the Contractor for itself, himself/herself, or themselves, and its, his/her, or their successors, as follows:

ARTICLE I. That the following documents shall comprise the Contract, and shall together be referred to as the "Agreement" or the "Contract Documents";

1. This Contract Agreement.
2. City of Grand Island's Specification for this project.
3. [NAME OF SUCCESSFUL BIDDER] bid signed and dated [DATE OF BID].

In the event of any conflict between the terms of the Contract Documents, the provisions of the document first listed shall prevail.

ARTICLE II. That the Contractor shall (a) furnish all tools, equipment, superintendence, transportation, and other construction materials, services and facilities; (b) furnish, as agent for the City, all materials, supplies and equipment specified and required to be incorporated in and form a permanent part of the completed work; (c) provide and perform all necessary labor; and (d) in a good substantial and workmanlike manner and in accordance with the requirements, stipulations, provisions, and conditions of the Contract documents as listed in the attached General Specifications, said documents forming the Contract and being as fully a part thereof as if repeated verbatim herein, perform, execute, construct and complete all work included in and covered by the City's official award of this Contract to the said Contractor, such award being based on the acceptance by the City of the Contractor's bid;

ARTICLE III. That the City shall pay to the Contractor for the performance of the work embraced in this Contract and the Contractor will accept as full compensation therefore the sum (subject to adjustment as provided by the Contract) of **[DOLLAR AMOUNT] ($00.00)** for all services, materials, and work covered by and included in the Contract award and designated in the foregoing Article II; payments thereof to be made in cash or its equivalent in the manner provided in the General Specifications.

The total cost of the Contract includes:

Base Bid:	$ .00
Sales Tax on Materials/Equipment:	$ .00
Sales Tax on Labor:	$ .00
Total	$ .00

The City of Grand Island, Nebraska operates on a fiscal year beginning October 1st and ending on the following September 30th. It is understood and agreed that any portion of this agreement which will be performed in a future fiscal year is contingent upon the City Council adopting budget statements and appropriations sufficient to fund such performance.

ARTICLE IV. The Contractor hereby agrees to act as agent for the City in purchasing materials and supplies for the City for this project. The City shall be obligated to the vendor of the materials and supplies for the purchase price, but the Contractor shall handle all payments hereunder on behalf of the City. The vendor shall make demand or claim for payment of the purchase price from the City by submitting an invoice to the Contractor. Title to all materials and supplies purchased hereunder shall vest in the City directly from the vendor. Regardless of the method of payment, title shall vest immediately in the City. The Contractor shall not acquire title to any materials and supplies incorporated into the project. All invoices shall bear the Contractor's name as agent for the City. This paragraph will apply only to these materials and supplies actually incorporated into and becoming a part of the finished product of the VIRBRATION MONITORING UPGRADES.

ARTICLE V. That the Contractor shall start work as soon as possible after the Contract is signed and the required bonds and insurance are approved, and that the Contractor shall deliver the equipment, tools, supplies, and materials F.O.B. Platte Generating Station, and complete the work on or before ***October 10, 2013.***

ARTICLE VI. The Contractor agrees to comply with all applicable State fair labor standards in the execution of this Contract as required by Section 73-102, R.R.S. 1943. The Contractor further agrees to comply with the provisions of Section 48-657, R.R.S. 1943, pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. During the performance of this Contract, the Contractor and all subcontractors agree not to discriminate in hiring or any other employment practice on the basis, of race, color, religion, sex, national origin, age or disability. The Contractor agrees to comply with all applicable Local, State and Federal rules and regulations. The Contractor agrees to maintain a drug-free workplace policy and will provide a copy of the policy to the City upon request. Every public contractor and his, her or its subcontractors who are awarded a contract by the City for the physical performance of services within the State of Nebraska shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska.

ARTICLE VII. Gratuities and kickbacks: City Code states that it is unethical for any person to offer, give, or agree to give any City employee or former City employee, or for any City employee or former City employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or

proposal therefor. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.

[SUCCESSFUL BIDDER]

By_____ Date _____

Title_____

CITY OF GRAND ISLAND, NEBRASKA

By_____ Date _____
Mayor

Attest:_____
City Clerk

The Contract is in due form according to law and hereby approved.

_____ Date _____
Attorney for the City

CITY OF GRAND ISLAND

Working Together for a Better Tomorrow, Today.

REQUEST FOR BIDS - GENERAL SPECIFICATIONS

The Bid shall be in accordance with the following and with all attached BID DATA and DETAILED SPECIFICATIONS.

All prices are to be furnished and installed FOB, Grand Island, Nebraska. **All prices shall be firm, and shall include all sales and use taxes as lawfully assessed under laws and regulations of the State of Nebraska.** * If bidder fails to include sales tax in their bid price or takes exception to including sales tax in their bid price, the City will add a 7.0% figure to the bid price for evaluation purposes; however, the City will only pay actual sales tax due.

Bids shall include the following on the **outside** of the mailing envelope: **"Vibration Monitoring Upgrades".** All sealed bids are due no later than Wednesday, **May 29, 2013 at 2:00 p.m. local time**. Submit **an original and three copies** of the bid to:

Mailing Address: City Clerk
City Hall
P. O. Box 1968
Grand Island, NE 68802-1968

Street Address: City Clerk
City Hall
100 E. First Street
Grand Island, NE 68801

Bids will be opened at this time in the City Hall Council Conference Room #1 located on 1st floor of City Hall. Any bid received after the specified date will not be considered. No verbal bid will be considered.

Bids will be evaluated by the Purchaser based on price, schedule, quality, adherence to schedule, plan and specifications, economy and efficiency of operation, experience and reputation of the bidder, ability, capacity, and skill of the bidder to perform contract required and adaptability of the particular items to the specific use intended.

The successful bidder will be required to comply with fair labor standards as required by Nebraska R.R.S.73-102 and comply with Nebraska R.R.S. 48-657 pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. Contractor shall maintain a drug free workplace policy. Every public contractor and his, her or its subcontractors who are awarded a contract by the City for the physical performance of services within the State of Nebraska shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska.

The equipment and materials must be new, the latest make or model, unless otherwise specified. Prior to approving the invoice for payment, the City reserves the right to thoroughly inspect and test the equipment to confirm compliance with specifications. Any equipment or material which does not meet the City's requirements will be returned at vendor's expense for correction. The invoice will be paid after approval at the next regularly scheduled City Council meeting and occurring after departmental approval of invoice; the City Council typically meets the second and fourth Tuesday of each month. Invoices must be received well in advance of Council date to allow evaluation and processing time.

Each bidder shall submit with the bid a certified check, a cashiers check, or bid bond payable to the City Treasurer in an amount no less than five percent (5%) of the bid price which shall guarantee good faith on the part of the Bidder and the entering into a contract within fourteen (14) days at the bid price if accepted by the City. **Your certified check, cashier's check or bid bond must be submitted in a separate envelope attached to the outside of the envelope containing the bid. Each envelope must be clearly marked indicating its contents. Failure to submit the necessary qualifying information in clearly marked and separate envelopes will result in your bid not being opened or considered. Only** surety companies authorized to do business in the State of Nebraska may issue bid bonds.

Successful bidder shall comply with the City's insurance requirements; performance and payment bonds are required for this project as outlined in the Detailed Specifications and Instructions to Bidders.

All bids shall be valid for at least thirty (30) working days after the bid deadline for evaluation purposes.

All bids must be on the bid form and must be signed and dated to be accepted. Please contact Ryan Schmitz at 308-385-5495, for questions concerning this specification.

VIBRATION MONITORING UPGRADES
Fall Outage 2013
Detailed Specifications

BACKGROUND: The Platte Generating System is a 100 MW coal fired powerplant in Grand Island, NE. The plant currently uses a Bently Nevada 3300 vibration monitoring system with a DataManager 2000 diagnostic system. The system monitors the following plant equipment: Turbine, Generator, Boiler Feed Pumps (x2), Condensate Pumps (x2), Circulating Water Pumps (x2), ID Fan, and FD Fan. See attached drawings for more details.

The Bently Nevada 3300 is a 4-rack system. Field wiring, from equipment transducers are run to a terminal block in the Bently Nevada Cabinet and then to input modules located on the back of each rack. Also, the Mark V Turbine Control system is jumpered at the terminal block. The racks are daisy chained together and connected to the Bailey infi90 DCS system (via a RS-232 cable through a foreign device interface) and the diagnostic computer (via an RS-422 cable).

The DataManager 2000 software is located on an old Gateway computer (Windows NT OS). This computer shares a common monitor (via a Belkin Omniview SE 4-Port Switch) with other plant HMI systems.

Both the Bently Nevada 3300 system and DataManager 2000 computer are located in the relay room, which is on the second (mezzanine) floor of the plant. The relay room has a false floor with removable tiles where most cabling is run. Elevator access is available.

SCOPE: This specification is for the replacement of the existing Bently Nevada 3300 system and diagnostic hardware/software. The Contractor shall furnish all hardware, software, electrical designs, system commissioning, technical assistance, parts identification, and project management necessary to fulfill all aspects of the specification.

A project manager must be provided as a point of contact between the City and Contractor. Project Manager and all essential installation personnel **ARE REQUIRED** to do a site visit prior to August 16th, 2013, to get a full understanding of the existing conditions and to do an 'in person' pre-installation meeting with City staff.

City staff will be available during installation to answer questions and facilitate equipment access only. All work required to replace the existing system and return it to a fully functional monitoring & diagnostics system (including seamless data transfer to the DCS) will be the sole responsibility of the Contractor.

Work shall include (but is not limited to):

Vibration Monitoring System
Contractor shall supply all materials and labor necessary to update the existing Bently Nevada 3300 system to a fully functional modern Vibration Monitoring System.

This work includes (but is not limited to):

- Remove and dispose of all necessary existing equipment to facilitate new installation. (Any credit for the sale of existing equipment can be used to reduce the cost of replacement).
- Supply and Replace the rack chassis, power supplies, I/O modules, and front monitors on the BN 3300.
- Field fit new racks into existing cabinet
- Updating all Modbus/DCS registries as needed to function cohesively with Bailey infi90 DCS as prior to upgrade.
- Supply and Install field connections necessary to interconnect new racks
- Supply and Install field connections necessary to connect system to new diagnostic hardware

Existing communication with the Bailey Infi90 DCS is accomplished using a RS-232 serial Modbus RTU protocol through a Bailey Foreign Device Interface (FDI). Modbus registers with the analog and digital data are mapped to Bailey control blocks in the proprietary configuration of the FDI. As an alternative option, the Contractor may utilize the existing plant OPC Communications Server (KepserverEx 5.9.170.0 with Allen Bradley Suite) to

facilitate communication with the plant Symphony Plus HMI system via Ethernet rather than interfacing through the DCS. Contractor will supply all materials (including drivers, cables, software, hardware, etc.) and labor required for the connections, modifications, and programming necessary to restore all real time vibration data and alarm settings to pre-existing functionality.

Contractor will be responsible for all modifications needed to the existing vibration monitoring cabinet. Contractor shall use an acceptable method of covering up any vacated cabinet cutouts. All field wiring and terminal blocks in the existing cabinet shall remain in place.

The Contractor shall provide updated electrical drawings depicting all changes. All City mark-ups shall be addressed. Drawings shall include (but are not limited to): 1) Overall System 2) Rack Layout.

Vibration Monitoring System Commissioning

The Contractor will perform configuration and verification of the new racks. Configuration will include the ability to transfer data (both statically and dynamically) to the new diagnostics system. All monitors will be configured to City's preference. The Contractor will provide all materials and labor required to configure new equipment. City will provide Contractor with any available drawings.

Rack Configuration Tests include (but are not limited to):

1) Configure individual monitor and monitor rack hardware.
2) Verify the functionality of the monitors/racks
3) Set alarm levels to OEM provided manuals. City may require some variance from OEM manual.
4) Document all part/model number and serial number information regarding new equipment.
5) Verify relay alarm circuits (if connected)
6) Perform loop checks for all monitored channels. Loop check to include:
    a) Known transducer signals injected into each monitor channel
    b) Known signal injected as to receive set alarm & danger levels.
    c) Verify relay outputs for event occurrences.
    d) Document all test procedures (including input signals and equipment used) and provide to City.

Diagnostic System

The Contractor shall install all computer hardware and software necessary to install and make Diagnostic System 'user ready'. Contractor shall supply a new Dell computer with a Windows Operating System to install/configure the new diagnostic system.

Diagnostic System Configuration includes (but is not limited to):

1) Units of measure, data range, and filtering.
2) Rack configuration
3) Recording initial gap voltages
4) Start up and Shut down data collection parameters
5) Software set points
6) Asset/Machinery graphics diagrams for all transducer systems in the Monitoring System and any integrated plant parameters

Diagnostic System Installation and Commissioning includes (but is not limited to):

1) Procurement and set up of computer. Computer should be manufactured by Dell and use the latest Windows Operating system compatible with the software. Contractor is responsible for all required software, hardware, and connecting cables.
2) Ethernet network verification between computer and Ethernet cabling/switches (if Ethernet is used)
3) Enterprise configuration for all machines associated with this project
4) All necessary packages, patches, software updates, labor & materials
5) Training must be provided to plant personnel on how to insert equipment parameters and utilize/manipulate data

Diagnostic System Optimization

1) Contractor shall include an alternate bid item for optimizing diagnostic software. This will include a site visit one month after installation is complete to review recorded data and optimize the software. Contractor shall assist with preliminary analysis of the acquired data. Contractor will verify all

acquisition parameters are acceptable for identification and characterization of monitored events. Parameter adjustments should be made as necessary and upon correspondence with plant personnel. Optimization of long and short term trending rates shall be analyzed and adjusted if necessary.

Attached Drawings

Attachment	Drawing Description
1	Existing System Layout
2 to 4	Transducer Installation Locations
5 to 12	Existing Rack Layout
13 to 15	Modbus Interface Database
16	Existing HMI Server Layout

BIDDING: The Bid shall include all applicable material, labor, travel, living expenses, taxes, permits, and/or delivery charges to Grand Island, Nebraska. Bids will be evaluated by the Owner based on price, schedule, quality, economy of operation, experience of the manufacturer, availability of service for repair and maintenance, adherence to specifications, and adaptability of the particular equipment for the specific use intended. Owner reserves the right to reject any or all bids, or waive informalities and to accept whichever bid that may be in the best interest of Owner, at its sole discretion. **Bids must be received by 2:00 p.m. on Wednesday, May 29, 2013**.

LOCATION: The Platte Generating Station is located at 1035 W. Wildwood Drive, two (2) miles south of Grand Island, Nebraska. The plant entrance is located two miles south of U.S. Highway 34 and 1 ½ miles east of U.S. Highway 281.

OWNER / CITY: Engineer Representative of the Platte Generating Station.

SCHEDULE: Work must be performed and completed during the facility's planned fall outage. The outage is **tentatively** scheduled for October 3rd 2013 to October 10th 2013. The unit will go offline at 10 am on the 3rd and back online at 10 am October 10th. Manpower requirements and working hours should be chosen such that the work can be completed during this timeframe.

Access to the plant will be available at all times and Contractor may determine working hours, however, the plant staff will only be available during normal, daytime, weekday working hours.

There is no separate contractor entrance at the Platte Generating Station. There is one gate with a card access security system and the Contractor may request to use access cards rather than request entry and exit for each trip. There is a $25.00 charge for each access card that is not returned when the job is completed.

MATERIALS, EQUIPMENT, AND SERVICES PROVIDED BY THE OWNER: Owner shall provide power and a drinking water source.

MATERIALS, EQUIPMENT, AND SERVICES PROVIDED BY THE CONTRACTOR: Contractor shall provide all required tools, test equipment, consumables and all other equipment and materials necessary to completely perform the work.

SAFETY: Contractor shall follow all applicable OSHA regulations and plant safety regulations. All personnel working on site will be required to view the plant's safety presentation.

During the course of work, Contractor shall clean up all debris daily and remove all unnecessary equipment/material. Upon completion, Contractor shall leave the premises in a neat and clean condition with respect to his/her own operation.

SUBMITTALS:

1. Contractor shall submit a proposed schedule for the work scope, including an estimate of the

number of hours and the number of employees required to perform the work.
2. Contractor must supply a minimum of three (3) references for recent work with similar scope.
3. List Labor and Materials separately on the bid sheet.
4. Provide an hourly rate sheet in the event that additional work is required while onsite.
5. Provide an itemized cost for all spare parts including: I/O modules, monitors, and power supplies. Items selected by the City for purchase will be delivered by the time installation is complete.
6. Include a list of optional training services available to City employees pertaining to diagnostic configuration and analyzing.

SERVICE RATES: Contractor shall include in the Bid a firm lump sum price, including expenses, and all other standard terms and conditions which will be in effect during the project. The Bid shall also include firm unit pricing for adjustments that may be required for work outside of the specified scope of services.

The Platte Generating Station is NOT tax exempt and is subject to 7.0% sales tax. See the Nebraska Department of Revenue's web site at www.revenue.state.ne.us for contractor's tax information.

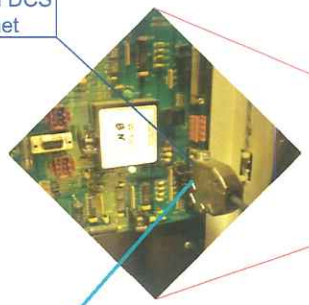
INSURANCE: Contractor shall comply with the attached Insurance Requirements.

SITE VISIT: A site visit prior to bidding is not required but highly recommended. Site visits can be arranged by contacting Ryan Schmitz at (308) 385-5495.

Bently Nevada 3300 System Cabinet

PC & DCS Connections on BN I/O Card

FDI in DCS Cabinet

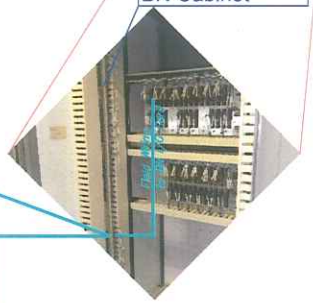


Bailey Infi-90 DCS Cabinets

RS-232 to FDI in DCS

RS-422 to PC

Terminal Block in BN Cabinet



Field Wiring

Field Wiring jumpered to Mark V

Mark V Control System Cabinet

Diagnostic Work Station

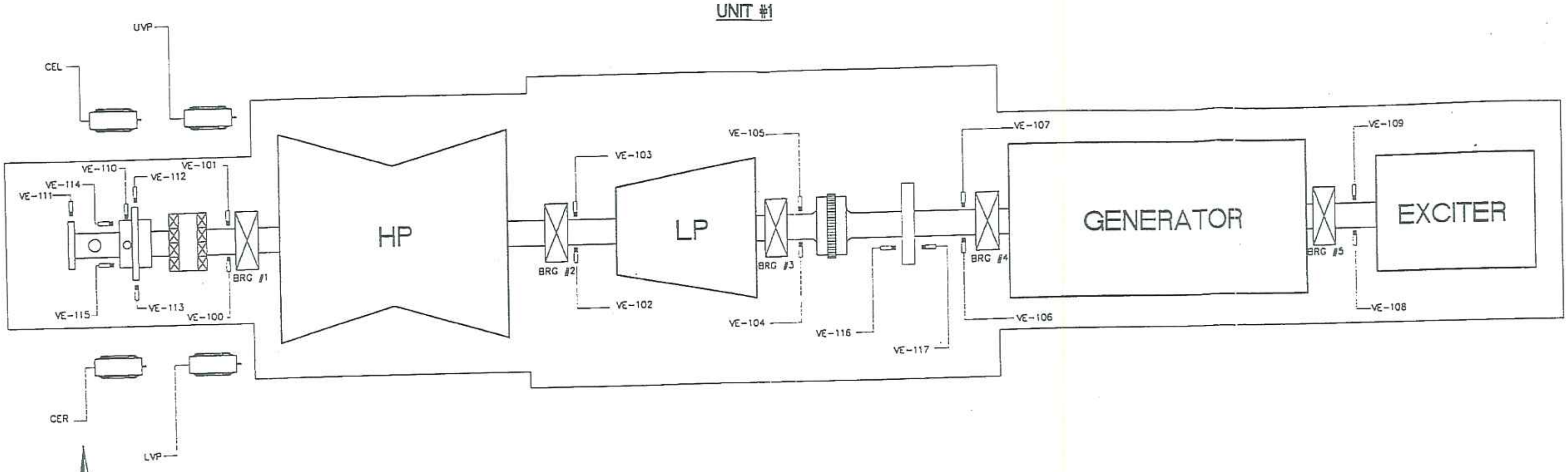
To Monitor

Diagnostic Work Station

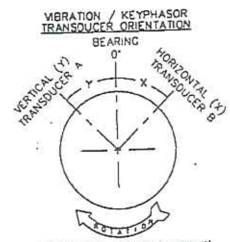
114-13

CITY OF GRAND ISLAND
PLATTE GENERATING STATION

UNIT #1



VIBRATION / KEYPHASOR TRANSDUCER ORIENTATION



NOTE: AS VIEWED FROM THE DRIVER (TURBINE) LOOKING TOWARDS THE DRIVEN (GENERATOR)

STEAM TURBINE GENERATOR

LOCATION:	TAG NO.	"Y"	"X"
TURB GEN BRG #1 X	VE-100		54° R
TURB GEN BRG #1 Y	VE-101	36° L	
TURB GEN BRG #2 X	VE-102		45° R
TURB GEN BRG #2 Y	VE-103	45° L	
TURB GEN BRG #3 X	VE-104		45° R
TURB GEN BRG #3 Y	VE-105	45° L	
TURB GEN BRG #4 X	VE-106		45° R
TURB GEN BRG #4 Y	VE-107	45° L	
TURB GEN BRG #5 X	VE-108		45° R
TURB GEN BRG #5 Y	VE-109	45° L	
TURB GEN KEY# PROBE 1	VE-110	45° L	
TURB GEN ECCENTRICTY	VE-111	90° L	
TURB GEN TACH PROBE A	VE-112	45° L	
TURB GEN TACH PROBE B	VE-113		45° R
TURB THRUST PROBE 1	VE-114		
TURB THRUST PROBE 2	VE-115		
TURB DIFF EXP PROBE 1	VE-116	109° L	
TURB DIFF EXP PROBE 2	VE-117		109° R

NOTES: UNLESS OTHERWISE SPECIFIED
1. REFER TO SHEETS 4-17

ZONE	LTR	DESCRIPTION	BY	DATE	APPD	DATE
		REVISION				

UNSPECIFIED TOLERANCES
.X ± .3
.XX ± .010 / .15
.XXX ± .005
1.60
63✓

DRAWN	B. MILLSPAW	030C195
CHECKED	R. BAGLIO	030C195
ISSUED	B. MILLSPAW	030C195
APPD	LUCHSINGER	040C195
	N/A	N/A

CITY OF GRAND ISLAND
PLATTE GEN. STATION
GRAND ISLAND, NE
UNIT 1

SHEET
APPLICATION

BENTLY NEVADA® MINDEN–NEVADA U.S.A.
LEADER IN PROXIMITY MEASUREMENTS

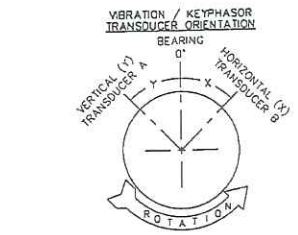
TURBINE MACHINE TRAIN
TRANSDUCER INSTALLATION

DISK NO.	SIZE	PROJECT NO.
\PROJ\COGI\	A1D	5300669-DIE5669

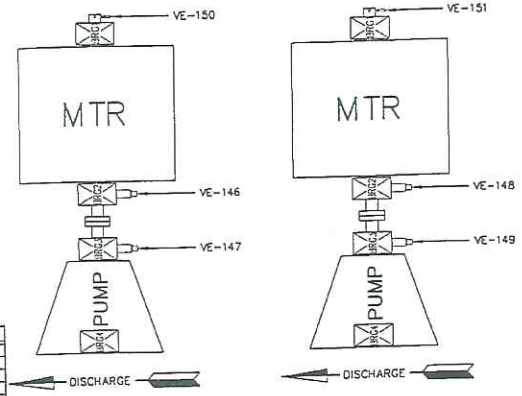
SCALE	FILE NAME	SHEET
NONE	P1-MT1	1 OF 27

114-13

CIRCULATION WATER PUMPS



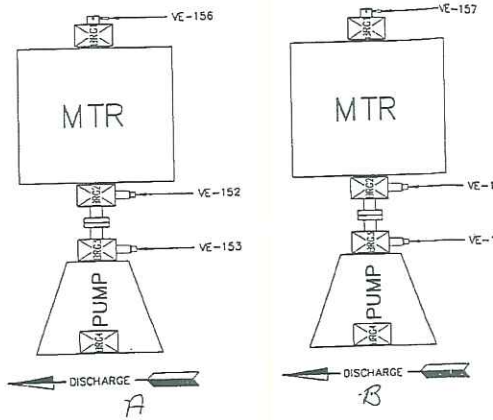
NOTE: AS VIEWED FROM THE DRIVER (MOTOR) LOOKING TOWARDS THE DRIVEN (PUMP)

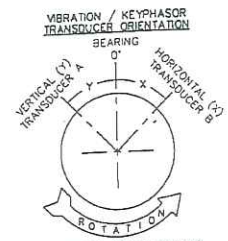


CIRC., COND., AND BOILER FEED PUMPS

LOCATION:	TAG NO.	"Y"	"X"
CIRC PUMP 1A VELO 1	VE-146	0°	
CIRC PUMP 1A VELO 2	VE-147	0°	
CIRC PUMP 1B VELO 1	VE-148	0°	
CIRC PUMP 1B VELO 2	VE-149	0°	
CIRC PUMP 1A KEYΦ	VE-150	11° L	
CIRC PUMP 1B KEYΦ	VE-151	11° L	

CONDENSATE PUMPS



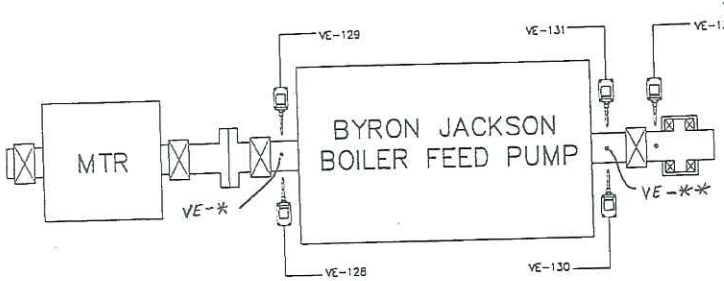


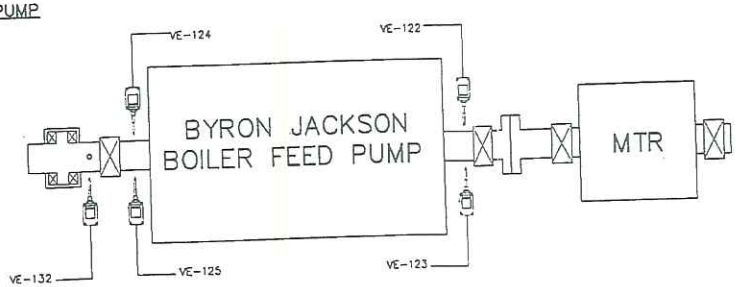
NOTE: AS VIEWED FROM THE DRIVER (MOTOR) LOOKING TOWARDS THE DRIVEN (PUMP)

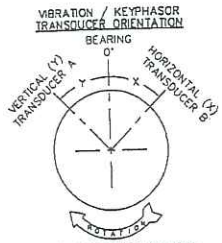
CIRC., COND., AND BOILER FEED PUMPS

LOCATION:	TAG NO.	"Y"	"X"
COND PUMP 1A VELO 1	VE-152	0°	
COND PUMP 1A VELO 2	VE-153	0°	
COND PUMP 1B VELO 1	VE-154	0°	
COND PUMP 1B VELO 2	VE-155	0°	
COND PUMP 1A KEYΦ	VE-156	45° L	
COND PUMP 1B KEYΦ	VE-157	45° L	

BOILER FEED PUMP







CIRC., COND., AND BOILER FEED PUMPS

LOCATION:	TAG NO.	"Y"	"X"
BF PUMP 1A INBOARD X	VE-122		45° R
BF PUMP 1A INBOURD Y	VE-123	45° L	
BF PUMP 1A OUTBOARD X	VE-124		45° R
BF PUMP 1A OUTBOARD Y	VE-125	45° L	
BF PUMP 1B INBOARD X	VE-128		55° R
BF PUMP 1B INBOARD Y	VE-129	35° L	
BF PUMP 1B OUTBOARD X	VE-130		45° R
BF PUMP 1B OUTBOARD Y	VE-131	45° L	
BF PUMP 1A KEYΦ	VE-132	45° L	
BF PUMP 1B KEYΦ	VE-133	45° L	
BF PUMP 1A VELO 1	VE-*	0°	
BF PUMP 1B VELO 2	VE-**	0°	

NOTE: AS VIEWED FROM THE DRIVER (MOTOR) LOOKING TOWARDS THE DRIVEN (PUMP)

1. REFER TO SHEETS 18 THRU 22.

NOTES: UNLESS OTHERWISE SPECIFIED

UNSPECIFIED TOLERANCES
.x ± .3
.xx ± .010
.xxx ± .005
FINISHED MACHINED SURFACES 1.60 63
ANGULAR ± 1°
MILLIMETER INCH OR MILLIMETER / INCH

DRAWN	B. MILLSPAW	30CT95
CHECK	R. BAGLIO	04OCT95
ENGR	B. MILLSPAW	03OCT95
MFG	LUCHSINGER	04OCT95
QUALITY	N/A	N/A

CITY OF GRAND ISLAND
PLATTE GEN. STATION
GRAND ISLAND, NE
UNIT 1
NEXT ASSY
APPLICATION

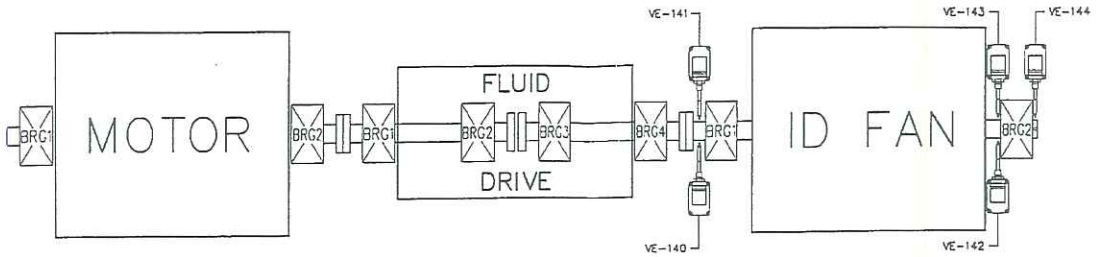
BENTLY NEVADA MINDEN-NEVADA U.S.A. LEADER IN PROXIMITY MEASUREMENTS

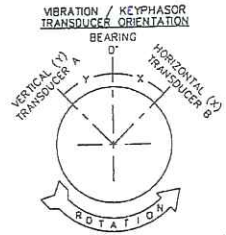
CIRC. WATER, CONDENSATE, AND BOILER FEED PUMP MACHINE TRAINS TRANSDUCER INSTALLATION

DISC NO. \PROJ\COGI\ | SIZE A1D | PROJECT NO. 5300669-DIE5669
SCALE NONE | FILE NAME P1-MT2 | SHEET 2 OF 27

ZONE	LTR	DESCRIPTION	BY	DATE	APPD	DATE

REVISION

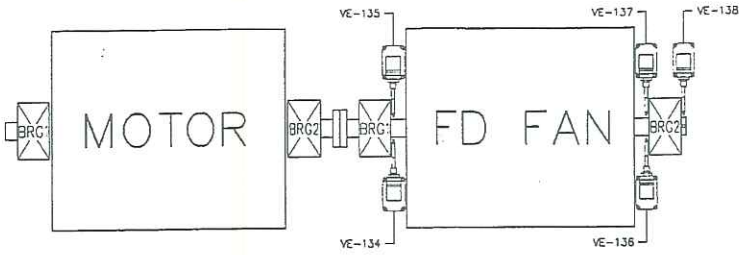


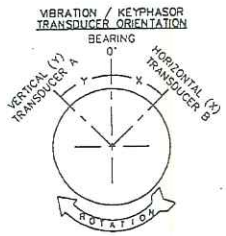


NOTE: AS VIEWED FROM THE DRIVER (MOTOR) LOOKING TOWARDS THE DRIVEN (FAN)

INDUCED DRAFT FAN

LOCATION:	TAG NO. Y/X	"Y"	"X"
ID FAN INBD REL. VIB.	VE-141/VE-140	45° L	45° R
ID FAN OUTBD REL. VIB.	VE-143/VE-142	45° L	45° R
ID FAN KEYPHASOR	VE-144	45° L	





NOTE: AS VIEWED FROM THE DRIVER (MOTOR) LOOKING TOWARDS THE DRIVEN (FAN)

FORCED DRAFT FAN

LOCATION:	TAG NO. Y/X	"Y"	"X"
FD FAN INBD REL. VIB.	VE-135/VE-134	45° L	45° R
FD FAN OUTBD REL. VIB.	VE-137/VE-136	45° L	45° R
FD FAN KEYPHASOR	VE-138	45° L	

1. REFER TO SHEETS 23 THRU 27 FOR MACHINE MODIFICATIONS.

NOTES: UNLESS OTHERWISE SPECIFIED

UNSPECIFIED TOLERANCES
X.X = .3
X.XX = .010
X.XXX = .005
FINISH MACHINED SURFACES 63
ANGULAR ± 1°
MILLIMETER OR INCH
MILLIMETER / INCH

ZONE	LTR	DESCRIPTION	BY	DATE	APPD	DATE
REVISION						

DRAWN	R. BAGLIO	02OCT95
ENGR	HENDERSON	27SEP95
CHECK	R. BAGLIO	26SEP95
APPD	LUCHSINGER	03OCT95
CAGE	N/A	N/A
NEXT ASSY	NONE	
USED ON	APPLICATION	

BENTLY NEVADA
MINDEN–NEVADA U.S.A.
LEADER IN PROXIMITY MEASUREMENTS

MACHINE TRAIN OVERVIEW
ID AND FD FANS – TRANSDUCER LOCATION AND ORIENTATION

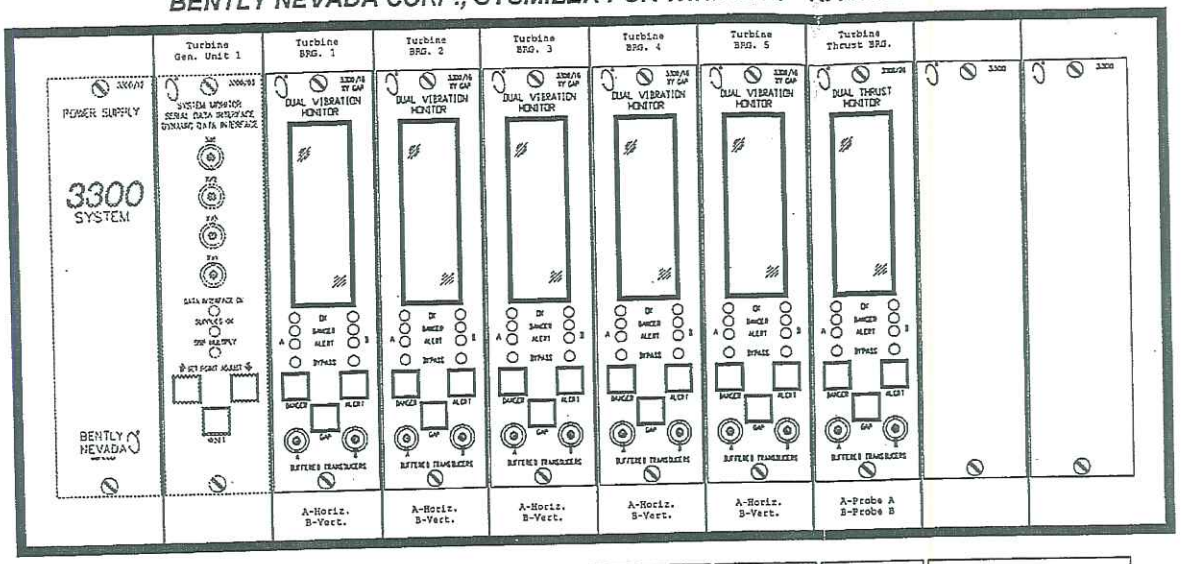
DISK NO.	SIZE	PROJECT NO.
\PROJ\COGI\	A1D	5300669-DIE5669
SCALE	FILE NAME	SHEET
NONE	P1-MT3	3 OF 27

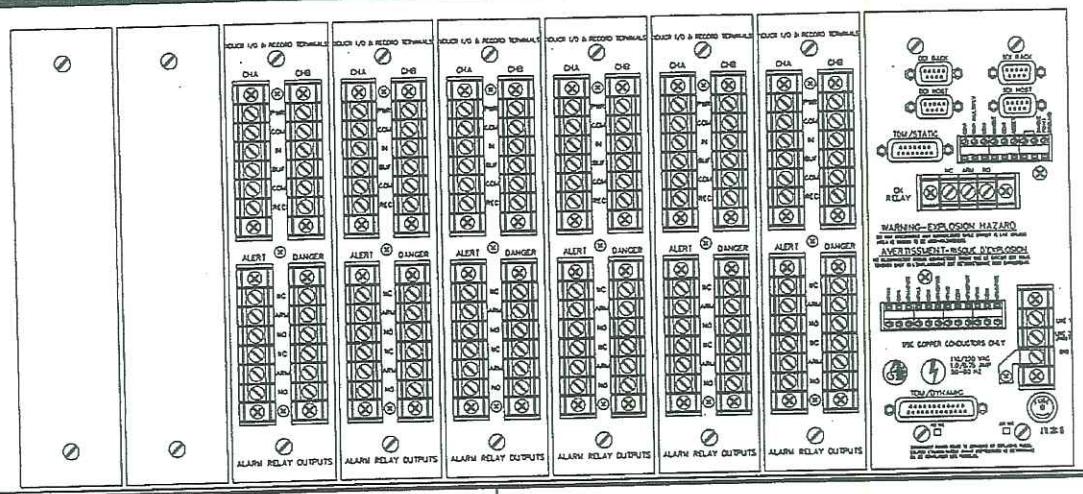
SYSMIZER FOR WINDOWS, 2.0

BENTLY NEVADA CORP., 1994

CUSTOMER:City of Grand Island, NE.					PROJECT:Platte Generating Station		
DATE: 18 December, 1995		SYSTEM DESCRIPTION:TSI System #1				BY:kld	MACHINE TRAIN:Turbine Generator #1
POS	PART NUMBER	FULL SCALE RANGE	RELAYS	APPROVLS	TRSDCR	BARRIER	TAGGING/OTHER INFORMATION
RACK	Rack 3300/05-24-00-00	NA	NA	NONE	NA	NONE	
WP HSNG	NONE	NA	NA	NA	NA	NA	
1	AC Power Supply 3300/12-01-20-00	95-125 Vac	NA	NONE	NA	NONE	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
2	Dynamic Data Intrfc. Sys. Mntr 3300/03-03-00	NA	NA	NONE	NA	NA	Line 1:=TOP=Turbine;BOTTOM= Line 2:=TOP=Gen. Unit 1;BOTTOM= Line 3:=TOP=;BOTTOM=
3	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=Turbine;BOTTOM=A-Horiz. Line 2:=TOP=BRG. 1;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
4	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=Turbine;BOTTOM=A-Horiz. Line 2:=TOP=BRG. 2;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
5	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=Turbine;BOTTOM=A-Horiz. Line 2:=TOP=BRG. 3;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
6	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=Turbine;BOTTOM=A-Horiz. Line 2:=TOP=BRG. 4;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
7	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=Turbine;BOTTOM=A-Horiz. Line 2:=TOP=BRG. 5;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
8	Dual Thrust Position 3300/20-03-01-02-00-00	40-0-40 mils	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=Turbine;BOTTOM=A-Probe A Line 2:=TOP=Thrust BRG.;BOTTOM=B-Probe B Line 3:=TOP=;BOTTOM=
9	Blank Panel	NA NA	NA	NA	NA	NA	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
10	Blank Panel	NA NA	NA	NA	NA	NA	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=

BENTLY NEVADA CORP., SYSMIZER FOR WINDOWS - RACK LAYOUT





CUSTOMER:City of Grand Island, NE.		PROJECT:Platte Generating Station	
DATE: 18 December, 1995	SYSTEM DESCRIPTION:TSI System #1	BY:kld	MACHINE TRAIN:Turbine Generator #1

SYSMIZER FOR WINDOWS, 2.0

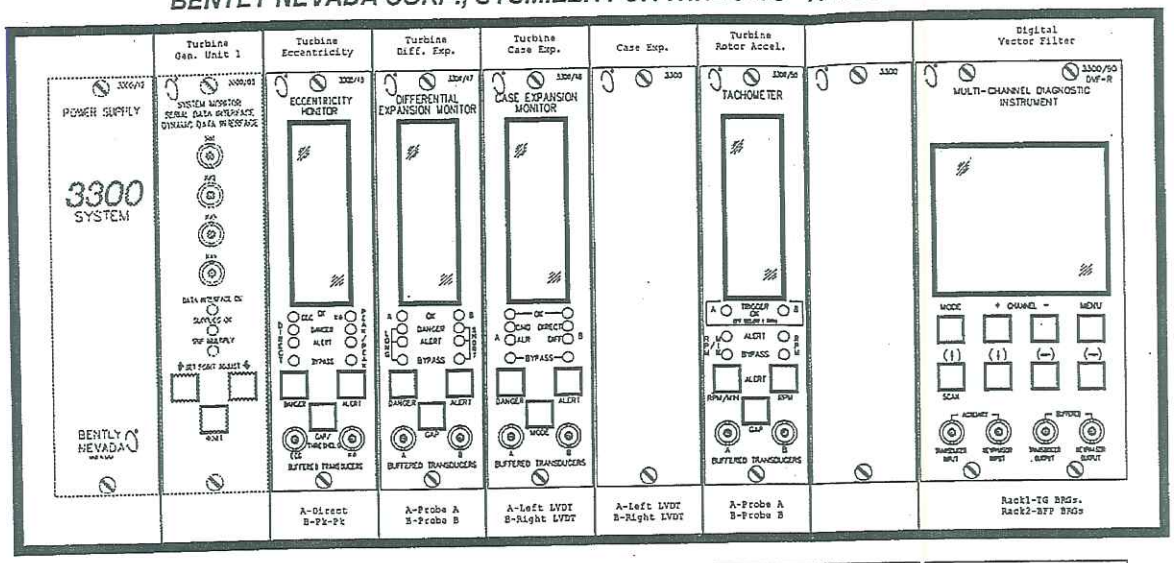
BENTLY NEVADA CORP., 1994

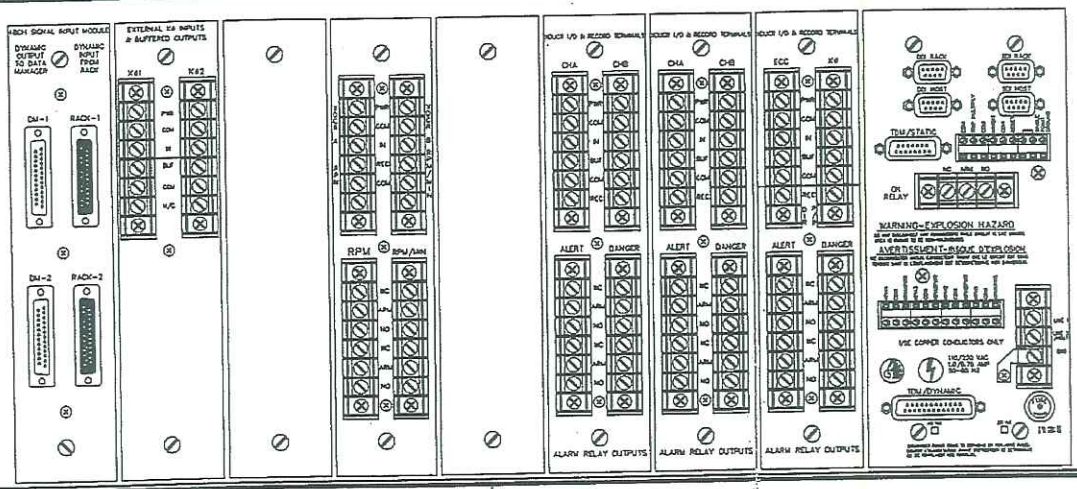
CUSTOMER:City of Grand Island, NE. | PROJECT:Platte Generating Station

DATE: 18 December, 1995 | SYSTEM DESCRIPTION:TSI System #2 | BY:kld | MACHINE TRAIN:Turbine Generator #1

POS	PART NUMBER	FULL SCALE RANGE	RELAYS	APPROVLS	TRSDCR	BARRIER	TAGGING/OTHER INFORMATION
RACK	Rack 3300/05-24-00-00	NA	NA	NONE	NA	NONE	
WP HSNG	NONE	NA	NA	NA	NA	NA	
1	AC Power Supply 3300/12-01-20-00	95-125 Vac	NA	NONE	NA	NONE	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
2	Dynamic Data Intrfc. Sys. Mntr 3300/03-03-00	NA	NA	NONE	NA	NA	Line 1:=TOP=Turbine;BOTTOM= Line 2:=TOP=Gen. Unit 1;BOTTOM= Line 3:=TOP=;BOTTOM=
3	Eccentricity Monitor 3300/40-02-01-02-00-00	0-10 mils pp 10-0-10 mils	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=Turbine;BOTTOM=A-Direct Line 2:=TOP=Eccentricity;BOTTOM=B-Pk-Pk . Line 3:=TOP=;BOTTOM=
4	Comp. Input Diff. Expnsn. 3300/47-09-03-02-00	0.5-0-0.5 inch	HERMETIC	NONE	25 mm	N/A	Line 1:=TOP=Turbine;BOTTOM=A-Probe A Line 2:=TOP=Diff. Exp.;BOTTOM=B-Probe B Line 3:=TOP=;BOTTOM=
5	Case Expansion Monitor 3300/48-01-01-02-00	0-1 Inch	HERMETIC	NONE	1in LVDT	NA	Line 1:=TOP=Turbine;BOTTOM=A-Left LVDT Line 2:=TOP=Case Exp.;BOTTOM=B-Right LVDT Line 3:=TOP=;BOTTOM=
6	Blank Panel	NA NA	NA	NA	NA	NA	Line 1:=TOP=;BOTTOM=A-Left LVDT Line 2:=TOP=Case Exp.;BOTTOM=B-Right LVDT Line 3:=TOP=;BOTTOM=
7	Rotor Acceleration Tach 3300/50-02-02-00-00	N/A	HERMETIC	NONE	N/A	NONE	Line 1:=TOP=Turbine;BOTTOM=A-Probe A Line 2:=TOP=Rotor Accel.;BOTTOM=B-Probe B Line 3:=TOP=;BOTTOM=
8	Blank Panel	NA NA	NA	NA	NA	NA	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
9	Multi-channel Diagnostc 3300/90-00-00	NA	NA	NONE	NA	NONE	Line 1:=TOP=Digital;BOTTOM=Rack1-TG BRGs. Line 2:=TOP=Vector Filter;BOTTOM=Rack2-BFP BRGs Line 3:=TOP=;BOTTOM=
10	2ND POSITION FOR (2) POSITION MONITOR SELECTED ABOVE						

BENTLY NEVADA CORP., SYSMIZER FOR WINDOWS - RACK LAYOUT





CUSTOMER:City of Grand Island, NE.		PROJECT:Platte Generating Station	
DATE: 18 December, 1995	SYSTEM DESCRIPTION:TSI System #2	BY:kld	MACHINE TRAIN:Turbine Generator #1

SYSMIZER FOR WINDOWS, 2.0

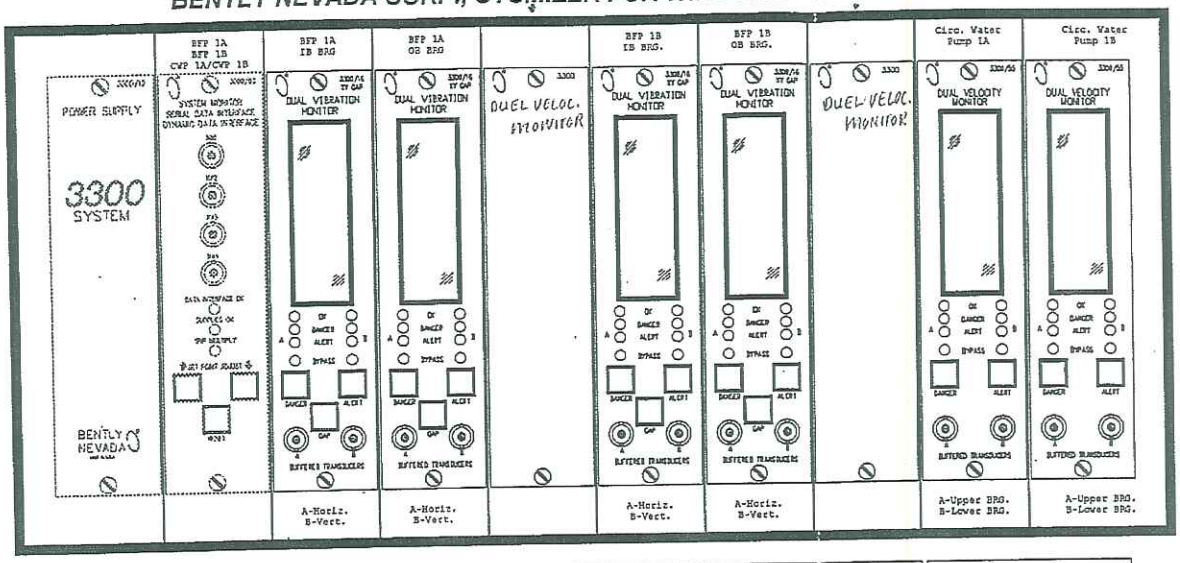
BENTLY NEVADA CORP., 1994

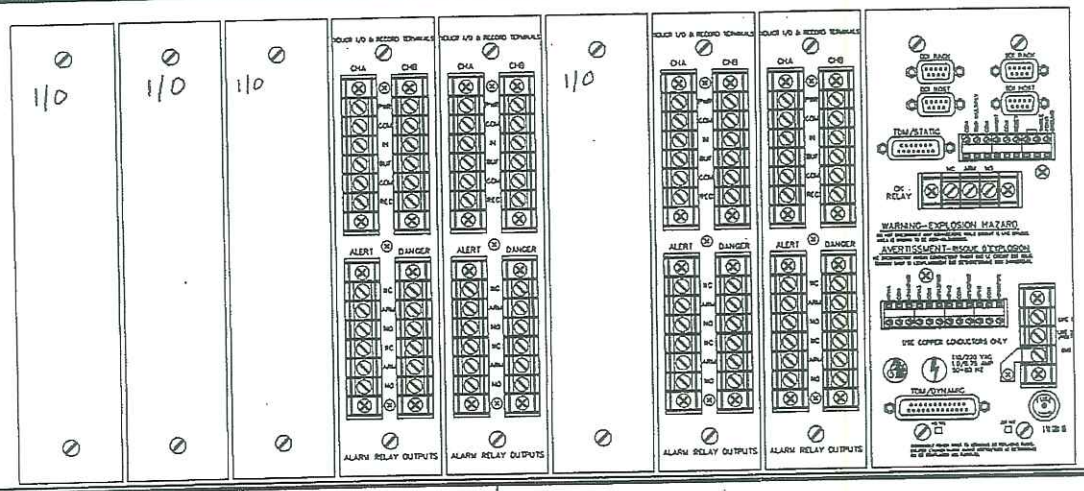
CUSTOMER:City of Grand Island, NE. PROJECT:Platte Generating Station

DATE: 18 December, 1995 SYSTEM DESCRIPTION:Aux. System #3 BY:kld MACHINE TRAIN:Boiler Feed Pumps 1A&1B/Circulation Water Pumps 1A&1B

POS	PART NUMBER	FULL SCALE RANGE	RELAYS	APPROVLS	TRSDCR	BARRIER	TAGGING/OTHER INFORMATION
RACK	Rack 3300/05-24-00-00	NA	NA	NONE	NA	NONE	
WP HSNG	NONE	NA	NA	NA	NA	NA	
1	AC Power Supply 3300/12-01-20-00	95-125 Vac	NA	NONE	NA	NONE	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
2	Dynamic Data Intrfc. Sys. Mntr 3300/03-03-00	NA	NA	NONE	NA	NA	Line 1:=TOP=BFP 1A;BOTTOM= Line 2:=TOP=BFP 1B;BOTTOM= Line 3:=TOP=CWP 1A/CWP 1B;BOTTOM=
3	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-50 ~~0-10~~ mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=BFP 1A;BOTTOM=A-Horiz. Line 2:=TOP=1B BRG;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
4	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=BFP 1A;BOTTOM=A-Horiz. Line 2:=TOP=OB BRG;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
5	~~Blank-Panel~~ Duel Velocity Monitor	~~NA~~ ~~NA~~ 0-1 mils PK-PK	NA	NA	NA	NA	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
6	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=BFP 1B;BOTTOM=A-Horiz. Line 2:=TOP=1B BRG.;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
7	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=BFP 1B;BOTTOM=A-Horiz. Line 2:=TOP=OB BRG.;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
8	~~Blank-Panel~~ Duel Velocity Monitor	~~NA~~ ~~NA~~ 0-1 mils PK-PK	NA	NA	NA	NA	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
9	Dual Velocity Monitor 3300/55-03-04-05-05-00-00-01	0-10 mils pk-pk 0-10 mils pk-pk	NA	NONE	Velomitr	NONE	Line 1:=TOP=Circ. Water;BOTTOM=A-Upper BRG. Line 2:=TOP=Pump 1A;BOTTOM=B-Lower BRG. Line 3:=TOP=;BOTTOM=
10	Dual Velocity Monitor 3300/55-03-04-05-05-00-00-01	0-10 mils pk-pk 0-10 mils pk-pk	NA	NONE	Velomitr	NONE	Line 1:=TOP=Circ. Water;BOTTOM=A-Upper BRG. Line 2:=TOP=Pump 1B;BOTTOM=B-Lower BRG. Line 3:=TOP=;BOTTOM=

BENTLY NEVADA CORP., SYSMIZER FOR WINDOWS - RACK LAYOUT





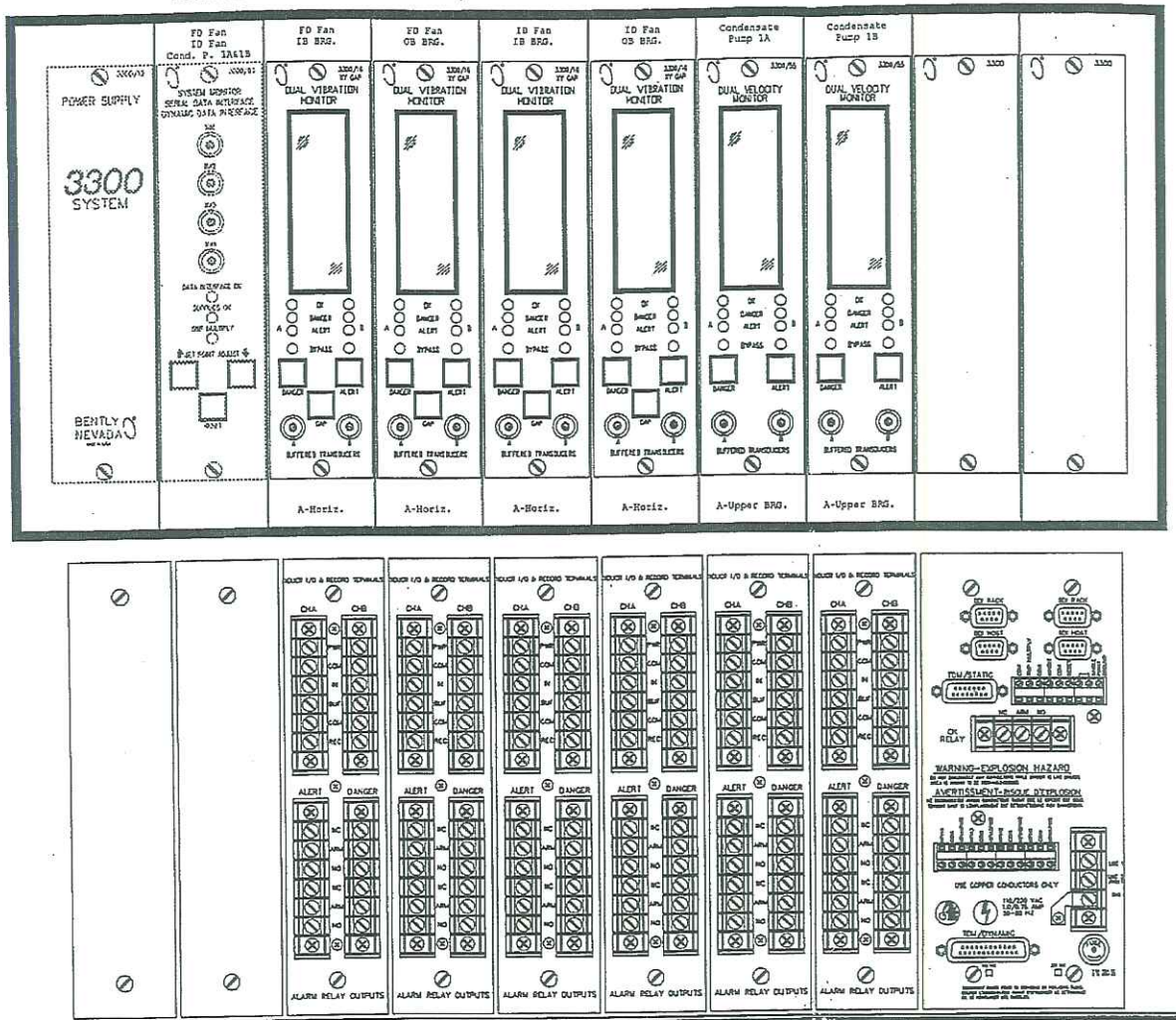
CUSTOMER:City of Grand Island, NE.		PROJECT:Platte Generating Station	
DATE: 18 December, 1995	SYSTEM DESCRIPTION:Aux. System #3	BY:kld	MACHINE TRAIN:Boiler Feed Pumps 1A&1B/Circulation Water Pumps 1A&1B

SYSMIZER FOR WINDOWS, 2.0

BENTLY NEVADA CORP., 1994

CUSTOMER:City of Grand Island, NE.					PROJECT:Platte Generating Station		
DATE: 18 December, 1995		SYSTEM DESCRIPTION:System #4			BY:kld		MACHINE TRAIN:ID&FD Fans/Condensate Pumps 1A&1B
POS	PART NUMBER	FULL SCALE RANGE	RELAYS	APPROVLS	TRSDCR	BARRIER	TAGGING/OTHER INFORMATION
RACK	Rack 3300/05-24-00-00	NA	NA	NONE	NA	NONE	
WP HSNG	NONE	NA	NA	NA	NA	NA	
1	AC Power Supply 3300/12-01-20-00	95-125 Vac	NA	NONE	NA	NONE	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
2	Dynamic Data Intrfc. Sys. Mntr 3300/03-03-00	NA	NA	NONE	NA	NA	Line 1:=TOP=FD Fan;BOTTOM= Line 2:=TOP=ID Fan;BOTTOM= Line 3:=TOP=Cond. P. 1A&1B;BOTTOM=
3	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-02	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=FD Fan;BOTTOM=A-Horiz. Line 2:=TOP=IB BRG.;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
4	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-02	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=FD Fan;BOTTOM=A-Horiz. Line 2:=TOP=OB BRG.;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
5	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-02	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=ID Fan;BOTTOM=A-Horiz. Line 2:=TOP=IB BRG.;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
6	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-02	0-20 ~~0-10~~ mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=ID Fan;BOTTOM=A-Horiz. Line 2:=TOP=OB BRG.;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
7	Dual Velocity Monitor 3300/55-03-04-05-05-00-00-00	0-10 mils pk-pk 0-10 mils pk-pk	NA	NONE	Velcmitr	NONE	Line 1:=TOP=Condensate;BOTTOM=A-Upper BRG. Line 2:=TOP=Pump 1A;BOTTOM=B-Lower BRG. Line 3:=TOP=;BOTTOM=
8	Dual Velocity Monitor 3300/55-03-04-05-05-00-00-00	0-10 mils pk-pk 0-10 mils pk-pk	NA	NONE	Velcmitr	NONE	Line 1:=TOP=Condensate;BOTTOM=A-Upper BRG. Line 2:=TOP=Pump 1B;BOTTOM=B-Lower BRG. Line 3:=TOP=;BOTTOM=
9	Blank Panel	NA NA	NA	NA	NA	NA	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
10	Blank Panel	NA NA	NA	NA	NA	NA	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=

BENTLY NEVADA CORP., SYSMIZER FOR WINDOWS - RACK LAYOUT



CUSTOMER:City of Grand Island, NE.		PROJECT:Platte Generating Station	
DATE: 18 December, 1995	SYSTEM DESCRIPTION:System #4	BY:kld	MACHINE TRAIN:ID&FD Fans/Condensate Pumps 1A&1B

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Modbus Interface Database
City of Grand Island
Gateway 2 - Bentley-Nevada

Tagname	Description	Point Type	PLC #	PLC Location	Data Flow	Bailey Block	Scale Factor	Offset
1TGTURBALM01G2	TURBNE BEARING 1 VIBRATION	D	001	10001	->DCS	101	1.00	0.0000
1TGTURBALM02G2	TURBNE BEARING 1 VIBRATION	D	001	10002	->DCS	102	1.00	0.0000
SPR-10003-001	SPARE REGISTER 001 10003	D	001	10003	->DCS	103	1.00	0.0000
1TGTURBALM03G2	TURBNE BEARING 2 VIBRATION	D	001	10004	->DCS	104	1.00	0.0000
1TGTURBALM04G2	TURBNE BEARING 2 VIBRATION	D	001	10005	->DCS	105	1.00	0.0000
SPR-10006-001	SPARE REGISTER 001 10006	D	001	10006	->DCS	106	1.00	0.0000
1TGTURBALM05G2	TURBNE BEARING 3 VIBRATION	D	001	10007	->DCS	107	1.00	0.0000
1TGTURBALM06G2	TURBNE BEARING 3 VIBRATION	D	001	10008	->DCS	108	1.00	0.0000
SPR-10009-001	SPARE REGISTER 001 10009	D	001	10009	->DCS	109	1.00	0.0000
1TGTURBALM07G2	TURBNE BEARING 4 VIBRATION	D	001	10010	->DCS	110	1.00	0.0000
1TGTURBALM08G2	TURBNE BEARING 4 VIBRATION	D	001	10011	->DCS	111	1.00	0.0000
SPR-10012-001	SPARE REGISTER 001 10012	D	001	10012	->DCS	112	1.00	0.0000
1TGTURBALM09G2	TURBNE BEARING 5 VIBRATION	D	001	10013	->DCS	113	1.00	0.0000
1TGTURBALM10G2	TURBNE BEARING 5 VIBRATION	D	001	10014	->DCS	114	1.00	0.0000
SPR-10015-001	SPARE REGISTER 001 10015	D	001	10015	->DCS	115	1.00	0.0000
1TGTURBALM11G2	TURBNE THRUST BEARING VIBRATIO	D	001	10016	->DCS	116	1.00	0.0000
1TGTURBALM12G2	TURBNE THRUST BEARING VIBRATIO	D	001	10017	->DCS	117	1.00	0.0000
1TGTURBV1XG2	TURBINE BEARING 1 X VIBRATION	A	001	30101	->DCS	201	1.00	0.0000
SPR-30102	SPARE REGISTER 001 30102	A	001	30102	->DCS	202	1.00	0.0000
1TGTURBV1YG2	TURBINE BEARING 1 Y VIBRATION	A	001	30103	->DCS	203	1.00	0.0000
SPR-30104	SPARE REGISTER 001 30104	A	001	30104	->DCS	204	1.00	0.0000
1TGTURBV2XG2	TURBINE BEARING 2 X VIBRATION	A	001	30117	->DCS	205	1.00	0.0000
SPR-30118	SPARE REGISTER 001 30118	A	001	30118	->DCS	206	1.00	0.0000
1TGTURBV2YG2	TURBINE BEARING 2 Y VIBRATION	A	001	30119	->DCS	207	1.00	0.0000
1TGTURBV3XG2	TURBINE BEARING 3 X VIBRATION	A	001	30133	->DCS	208	1.00	0.0000
SPR-30134	SPARE REGISTER 001 30134	A	001	30134	->DCS	209	1.00	0.0000
1TGTURBV3YG2	TURBINE BEARING 3 Y VIBRATION	A	001	30135	->DCS	210	1.00	0.0000
1TGTURBV4XG2	TURBINE BEARING 4 X VIBRATION	A	001	30149	->DCS	211	1.00	0.0000
SPR-30150	SPARE REGISTER 001 30150	A	001	30150	->DCS	212	1.00	0.0000
1TGTURBV4YG2	TURBINE BEARING 4 Y VIBRATION	A	001	30151	->DCS	213	1.00	0.0000
1TGTURBV5XG2	TURBINE BEARING 5 X VIBRATION	A	001	30165	->DCS	214	1.00	0.0000
SPR-30166	SPARE REGISTER 001 30166	A	001	30166	->DCS	215	1.00	0.0000
1TGTURBV5YG2	TURBINE BEARING 5 Y VIBRATION	A	001	30167	->DCS	216	1.00	0.0000
~~1TGTURBVTG2~~ 1TGTURBVTP1G2	TURB THRUST BEARING PROBE 1 VI	A	001	30181	->DCS	217	1.00	0.0000
SPR-30182	SPARE REGISTER 001 30182	A	001	30182	->DCS	218	1.00	0.0000
~~1TGTURBVTG2~~ 1TGTURBVTP2G2	TURB THRUST BEARING PROBE 2 VI	A	001	30183	->DCS	219	1.00	0.0000
PLC_STATUS_001	PLC STATUS 001	A	001	30999	->DCS	220	1.00	0.0000
1TGTURBALM13G2	TURBNE ECCENTRICITY	D	002	10001	->DCS	301	1.00	0.0000
1TGTURBALM14G2	TURBNE ECCENTRICITY	D	002	10002	->DCS	302	1.00	0.0000
SPR-10003-002	SPARE REGISTER 002 10003	D	002	10003	->DCS	303	1.00	0.0000
1TGTURBALM15G2	TURBNE DIFFERENTIAL EXPANSION	D	002	10004	->DCS	304	1.00	0.0000
1TGTURBALM16G2	TURBINE DIFFERENTIAL EXPANSION	D	002	10005	->DCS	305	1.00	0.0000
SPR-10006-002	SPARE REGISTER 002 10006	D	002	10006	->DCS	306	1.00	0.0000
1TGTURBALM17G2	TURBNE CASE EXPANSION	D	002	10007	->DCS	307	1.00	0.0000
1TGTURBALM18G2	TURBNE CASE EXPANSION	D	002	10008	->DCS	308	1.00	0.0000
SPR-10009-002	SPARE REGISTER 002 10009	D	002	10009	->DCS	309	1.00	0.0000
SPR-10010-002	SPARE REGISTER 002 10010	D	002	10010	->DCS	310	1.00	0.0000
SPR-10011-002	SPARE REGISTER 002 10011	D	002	10011	->DCS	311	1.00	0.0000

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Modbus Interface Database
City of Grand Island
Gateway 2 - Bentley-Nevada

Tagname	Description	Point Type	PLC #	PLC Location	Data Flow	Bailey Block	Scale Factor	Offset
SPR-10012-002	SPARE REGISTER 002 10012	D	002	10012	->DCS	312	1.00	0.0000
1TGTURBALM19G2	TURBNE SPEED HIGH	D	002	10013	->DCS	313	1.00	0.0000
1TGTURBALM20G2	TURBINE ACCELERATION HIGH	D	002	10014	->DCS	314	1.00	0.0000
1TGTURBECCG2	TURBINE ECCENTRICITY DIRECT	A	002	30102	->DCS	401	1.00	0.0000
1TGTURBDEXPG2	TURBINE DIFFERENTIAL EXPANSION	A	002	30117	->DCS	402	1.00	0.0000
1TGTURBCEXPG2	TURBINE CASE EXPANSION DIFFERE	A	002	30133	->DCS	403	1.00	0.0000
1TGTURBUVPOSG2	TURBINE UPPER CNTL VLV POSITIO	A	002	30149	->DCS	404	1.00	0.0000
1TGTURBLVPOSG2	TURBINE LOWER CNTL VLV POSITIO	A	002	30150	->DCS	405	1.00	0.0000
1TGTURBSPEEDG2	TURBINE SPEED	A	002	30165	->DCS	~~406~~ 4000	1.00	0.0000
SPR-30166-002	SPARE REGISTER 002 30166	A	002	30166	->DCS	407	1.00	0.0000
~~1TGTACCELG1~~ 1TGTACCELG2	TURBINE ACCELERATION	A	002	30167	->DCS	408	1.00	0.0000
PLC_STATUS_002	PLC STATUS 002	A	002	30999	->DCS	409	1.00	0.0000
1BFBFPAALM1G2	BFP 1A INBOARD BEARING VIB	D	003	10001	->DCS	501	1.00	0.0000
1BFBFPAALM2G2	BFP 1A INBOARD BEARING VIB	D	003	10002	->DCS	502	1.00	0.0000
SPR-10003-003	SPARE REGISTER 003 10003	D	003	10003	->DCS	503	1.00	0.0000
1BFBFPAALM3G2	BFP 1A OUTBOARD BEARING VIB	D	003	10004	->DCS	504	1.00	0.0000
1BFBFPAALM4G2	BFP 1A OUTBOARD BEARING VIB	D	003	10005	->DCS	505	1.00	0.0000
1BFBFPAALM5G2	BFP 1A THRUST BEARING VIBRATIO	D	003	10007	->DCS	506	1.00	0.0000
1BFBFPAALM6G2	BFP 1A THRUST BEARING VIBRATIO	D	003	10008	->DCS	507	1.00	0.0000
SPR-10009-003	SPARE REGISTER 003 10009	D	003	10009	->DCS	508	1.00	0.0000
1BFBFPBALM1G2	BFP 1B INBOARD BEARING VIB	D	003	10010	->DCS	509	1.00	0.0000
1BFBFPBALM2G2	BFP 1B INBOARD BEARING VIB	D	003	10011	->DCS	510	1.00	0.0000
SPR-10012-003	SPARE REGISTER 003 10012	D	003	10012	->DCS	511	1.00	0.0000
1BFBFPBALM3G2	BFP 1B OUTBOARD BEARING VIB	D	003	10013	->DCS	512	1.00	0.0000
1BFBFPBALM4G2	BFP 1B OUTBOARD BEARING VIB	D	003	10014	->DCS	513	1.00	0.0000
SPR-10015-003	SPARE REGISTER 003 10015	D	003	10015	->DCS	514	1.00	0.0000
1BFBFPBALM5G2	BFP 1B THRUST BEARING VIBRATIO	D	003	10016	->DCS	515	1.00	0.0000
1BFBFPBALM6G2	BFP 1B THRUST BEARING VIBRATIO	D	003	10017	->DCS	516	1.00	0.0000
SPR-10018-003	SPARE REGISTER 003 10018	D	003	10018	->DCS	517	1.00	0.0000
1CRCRCPAALM1G2	CIRC WATER PUMP 1A VIBRATION	D	003	10019	->DCS	518	1.00	0.0000
1CRCRCPAALM2G2	CIRC WATER PUMP 1A VIBRATION	D	003	10020	->DCS	519	1.00	0.0000
SPR-10021-003	SPARE REGISTER 003 10021	D	003	10021	->DCS	520	1.00	0.0000
1CRCRCPBALM1G2	CIRC WATER PUMP 1B VIBRATION	D	003	10022	->DCS	521	1.00	0.0000
1CRCRCPBALM2G2	CIRC WATER PUMP 1B VIBRATION	D	003	10023	->DCS	522	1.00	0.0000
1BFBFPAVIXG2	BFP 1A INBOARD BEARING X VIB	A	003	30101	->DCS	601	1.00	0.0000
SPR-30102-003	SPARE REGISTER 003 30102	A	003	30102	->DCS	602	1.00	0.0000
1BFBFPAVIYG2	BFP 1A INBOARD BEARING Y VIB	A	003	30103	->DCS	603	1.00	0.0000
1BFBFPAVOXG2	BFP 1A OUTBOARD BEARING X VIB	A	003	30117	->DCS	604	1.00	0.0000
SPR-30118-003	SPARE REGISTER 003 30118	A	003	30118	->DCS	605	1.00	0.0000
1BFBFPAVOYG2	BFP 1A OUTBOARD BEARING Y VIB	A	003	30119	->DCS	606	1.00	0.0000
1BFBFPAVTG2	BFP 1A THRUST BEARING VIBRATIO	A	003	30133	->DCS	607	1.00	0.0000
1BFBFPBVIXG2	BFP 1B INBOARD BEARING X VIB	A	003	30149	->DCS	608	1.00	0.0000
SPR-30150-003	SPARE REGISTER 003 30150	A	003	30150	->DCS	609	1.00	0.0000
1BFBFPBVIYG2	BFP 1B INBOARD BEARING Y VIB	A	003	30151	->DCS	610	1.00	0.0000
1BFBFPBVOXG2	BFP 1B OUTBOARD BEARING X VIB	A	003	30165	->DCS	611	1.00	0.0000
SPR-30166-003	SPARE REGISTER 003 30166	A	003	30166	->DCS	612	1.00	0.0000
1BFBFPBVOYG2	BFP 1B OUTBOARD BEARING Y VIB	A	003	30167	->DCS	613	1.00	0.0000
1BFBFPBVTG2	BFP 1B THRUST BEARING VIBRATIO	A	003	30181	->DCS	614	1.00	0.0000

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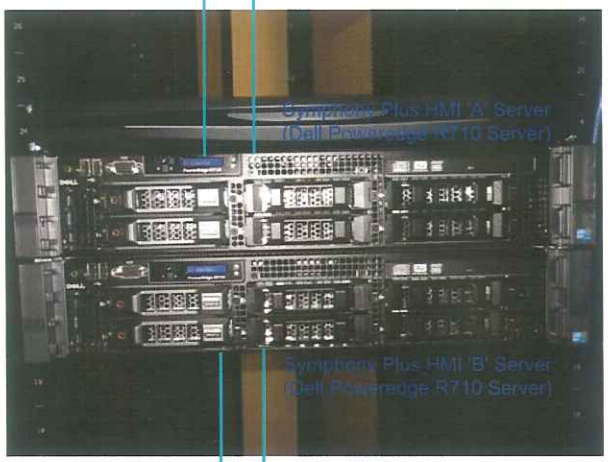
Modbus Interface Database
City of Grand Island
Gateway 2 - Bentley-Nevada

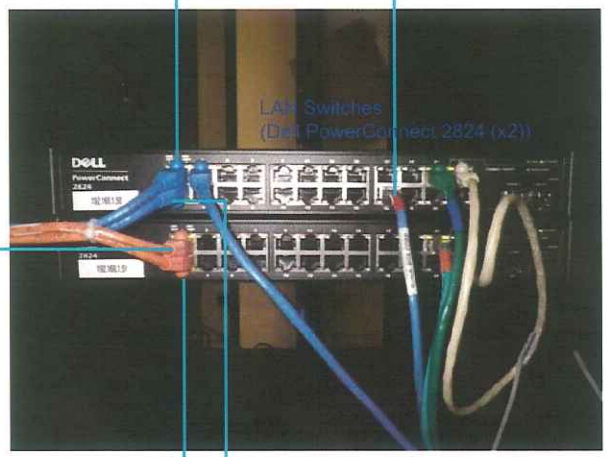
Tagname	Description	Point Type	PLC #	PLC Location	Data Flow	Bailey Block	Scale Factor	Offset
1CRCIRCPAVP1G2	CIRC WATER PUMP 1A PROBE 1 VIB	A	003	30197	->DCS	615	1.00	0.0000
1CRCIRCPAVP2G2	CIRC WATER PUMP 1A PROBE 2 VIB	A	003	30198	->DCS	616	1.00	0.0000
1CRCIRCPBVP1G2	CIRC WATER PUMP 1B PROBE 1 VIB	A	003	30213	->DCS	617	1.00	0.0000
1CRCIRCPBVP2G2	CIRC WATER PUMP 1B PROBE 2 VIB	A	003	30214	->DCS	618	1.00	0.0000
PLC_STATUS_003	PLC STATUS 003	A	003	30999	->DCS	619	1.00	0.0000
1CAFDFALM1G2	FD FAN INBOARD BEARING VIB	D	004	10001	->DCS	701	1.00	0.0000
1CAFDFALM2G2	FD FAN INBOARD BEARING VIB	D	004	10002	->DCS	702	1.00	0.0000
SPR-10003-004	SPARE REGISTER 004 10003	D	004	10003	->DCS	703	1.00	0.0000
1CAFDFALM3G2	FD FAN OUTBOARD BEARING VIB	D	004	10004	->DCS	704	1.00	0.0000
1CAFDFALM4G2	FD FAN OUTBOARD BEARING VIB	D	004	10005	->DCS	705	1.00	0.0000
SPR-10006-004	SPARE REGISTER 004 10006	D	004	10006	->DCS	706	1.00	0.0000
1FGIDFALM1G2	ID FAN INBOARD BEARING VIB	D	004	10007	->DCS	707	1.00	0.0000
1FGIDFALM2G2	ID FAN INBOARD BEARING VIB	D	004	10008	->DCS	708	1.00	0.0000
SPR-10009-004	SPARE REGISTER 004 10009	D	004	10009	->DCS	709	1.00	0.0000
1FGIDFALM3G2	ID FAN OUTBOARD BEARING VIB	D	004	10010	->DCS	710	1.00	0.0000
1FGIDFALM4G2	ID FAN OUTBOARD BEARING VIB	D	004	10011	->DCS	711	1.00	0.0000
SPR-10012-004	SPARE REGISTER 004 10012	D	004	10012	->DCS	712	1.00	0.0000
1CNCNDPAALM1G2	CONDENSATE PUMP 1A VIBRATION	D	004	10013	->DCS	713	1.00	0.0000
1CNCNDPAALM2G2	CONDENSATE PUMP 1A VIBRATION	D	004	10014	->DCS	714	1.00	0.0000
SPR-10015-004	SPARE REGISTER 004 10015	D	004	10015	->DCS	715	1.00	0.0000
1CNCNDPBALM1G2	CONDENSATE PUMP 1B VIBRATION	D	004	10016	->DCS	716	1.00	0.0000
1CNCNDPBALM2G2	CONDENSATE PUMP 1B VIBRATION	D	004	10017	->DCS	717	1.00	0.0000
1CAFDFVIXG2	FD FAN INBOARD BEARING X VIB	A	004	30101	->DCS	801	1.00	0.0000
SPR-30102-004	SPARE REGISTER 004 30102	A	004	30102	->DCS	802	1.00	0.0000
1CAFDFVIYG2	FD FAN INBOARD BEARING Y VIB	A	004	30103	->DCS	803	1.00	0.0000
1CAFDFVOXG2	FD FAN OUTBOARD BEARING X VIB	A	004	30117	->DCS	804	1.00	0.0000
SPR-30118-004	SPARE REGISTER 004 30118	A	004	30118	->DCS	805	1.00	0.0000
1CAFDFVOYG2	FD FAN OUTBOARD BEARING Y VIB	A	004	30119	->DCS	806	1.00	0.0000
1FGIDFVIXG2	ID FAN INBOARD BEARING X VIB	A	004	30133	->DCS	807	1.00	0.0000
SPR-30134-004	SPARE REGISTER 004 30134	A	004	30134	->DCS	808	1.00	0.0000
1FGIDFVIYG2	ID FAN INBOARD BEARING Y VIB	A	004	30135	->DCS	809	1.00	0.0000
1FGIDFVOXG2	ID FAN OUTBOARD BEARING X VIB	A	004	30149	->DCS	810	1.00	0.0000
SPR-30150-004	SPARE REGISTER 004 30150	A	004	30150	->DCS	811	1.00	0.0000
1FGIDFVOYG2	ID FAN OUTBOARD BEARING Y VIB	A	004	30151	->DCS	812	1.00	0.0000
1CNCNDSPAVP1G2	CONDENSATE PUMP 1A PROBE 1 VIB	A	004	30165	->DCS	813	1.00	0.0000
1CNCNDSPAVP2G2	CONDENSATE PUMP 1A PROBE 2 VIB	A	004	30166	->DCS	814	1.00	0.0000
1CNCNDSPBVP1G2	CONDENSATE PUMP 1B PROBE 1 VIB	A	004	30181	->DCS	815	1.00	0.0000
1CNCNDSPBVP2G2	CONDENSATE PUMP 1B PROBE 2 VIB	A	004	30182	->DCS	816	1.00	0.0000
PLC_STATUS_004	PLC STATUS 004	A	004	30999	->DCS	817	1.00	0.0000



Symphony Plus HMI 'A' Server
(Dell Poweredge R710 Server)

Symphony Plus HMI 'B' Server
(Dell Poweredge R710 Server)

Ethernet



LAN Switches
(Dell PowerConnect 2824 (x2))

Ethernet

Ethernet

OPC Server
(Dell Precision T3500 w/ Windows 7 OS)

MINIMUM INSURANCE REQUIREMENTS
CITY OF GRAND ISLAND, NEBRASKA

The successful bidder shall obtain insurance from companies authorized to do business in Nebraska of such types and in such amounts as may be necessary to protect the Bidder and the interests of the City against hazards or risks of loss as hereinafter specified. This insurance shall cover all aspects of the Bidder's operations and completed operations. Failure to maintain adequate coverage shall not relieve Bidder of any contractual responsibility or obligation. Minimum insurance coverage shall be the amounts stated herein or the amounts required by applicable law, whichever are greater.

1. WORKERS COMPENSATION AND EMPLOYER'S LIABILITY

This insurance shall protect the Bidder against all claims under applicable State workers compensation laws. This insurance shall provide coverage in every state in which work for this project might be conducted. The liability limits shall not be less than the following:

Workers Compensation	Statutory Limits
Employers Liability	$100,000 each accident
	$100,000 each employee
	$500,000 policy limit

2. BUSINESS AUTOMOBILE LIABILITY

This insurance shall be written in comprehensive form and shall protect the Bidder, Bidder's employees, or subcontractors from claims due to the ownership, maintenance, or use of a motor vehicle. The liability limits shall not be less than the following:

Bodily Injury & Property Damage	$ 500,000 Combined Single Limit

3. COMPREHENSIVE GENERAL LIABILITY

The comprehensive general liability coverage shall contain no exclusion relative to explosion, collapse, or underground property. The liability limits shall not be less than the following:

Bodily Injury & Property Damage	$ 500,000 each occurrence
	$1,000,000 aggregate

4. UMBRELLA LIABILITY INSURANCE

This insurance shall protect the Bidder against claims in excess of the limits provided under employer's liability, comprehensive automobile liability, and commercial general liability policies. The umbrella policy shall follow the form of the primary insurance, including the application of the primary limits. The liability limits shall not be less than the following:

Bodily Injury & Property Damage	$1,000,000 each occurrence
	$1,000,000 general aggregate

5. ADDITIONAL REQUIREMENTS

The City may require insurance covering a Bidder or subcontractor more or less than the standard requirements set forth herein depending upon the character and extent of the work to be performed by such Bidder or subcontractor.

Insurance as herein required shall be maintained in force until the City releases the Bidder of all obligations under the Contract.

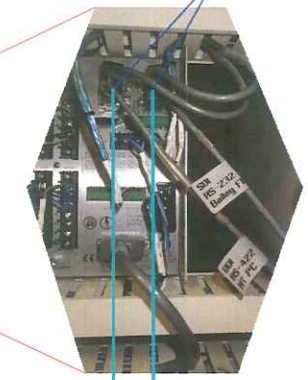
The Bidder shall provide and carry any additional insurance as may be required by special provisions of these specifications.

6. CERTIFICATE OF INSURANCE

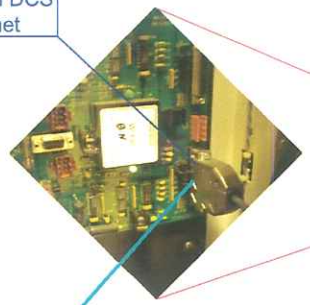
Satisfactory certificates of insurance shall be filed with the City prior to starting any work on this Contract. **The certificates shall show the City as an additional insured on all coverage except Workers Compensation. The certificate shall state that thirty (30) days written notice shall be given to the City before any policy is cancelled (strike the "endeavor to" wording often shown on certificate forms). If the Bidder cannot have the "endeavor to" language stricken, the Bidder may elect to provide a new certificate of insurance every thirty (30) days during the contract. Bidder shall immediately notify the City if there is any reduction of coverage because of revised limits or claims paid which affect the aggregate of any policy.**

Bently Nevada 3300 System Cabinet

PC & DCS Connections on BN I/O Card



FDI in DCS Cabinet

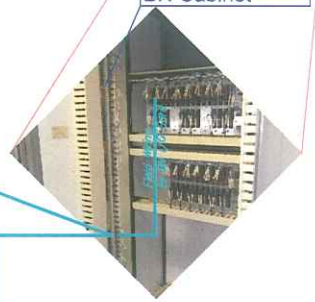


Bailey Infi-90 DCS Cabinets

RS-232 to FDI in DCS

RS-422 to PC

Terminal Block in BN Cabinet



Field Wiring

Field Wiring

Field Wiring jumpered to Mark V

Mark V Control System Cabinet

Diagnostic Work Station

PC to Switch

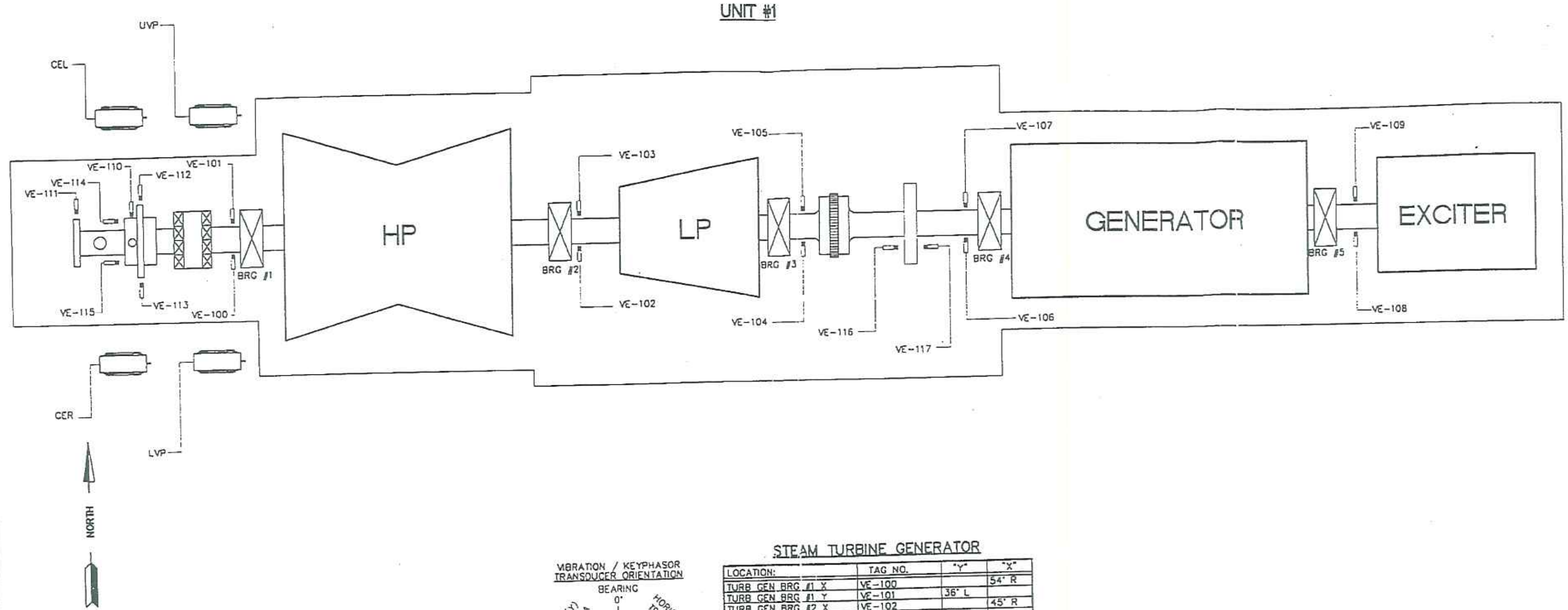
To Monitor

Diagnostic Work Station

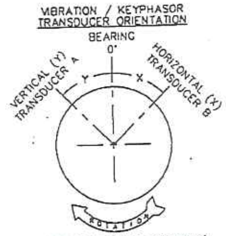
114-13

CITY OF GRAND ISLAND PLATTE GENERATING STATION

UNIT #1



VIBRATION / KEYPHASOR TRANSDUCER ORIENTATION



NOTE: AS VIEWED FROM THE DRIVER (TURBINE) LOOKING TOWARDS THE DRIVEN (GENERATOR)

STEAM TURBINE GENERATOR

LOCATION:	TAG NO.	"Y"	"X"
TURB GEN BRG #1 X	VE-100		54° R
TURB GEN BRG #1 Y	VE-101	36° L	
TURB GEN BRG #2 X	VE-102		45° R
TURB GEN BRG #2 Y	VE-103	45° L	
TURB GEN BRG #3 X	VE-104		45° R
TURB GEN BRG #3 Y	VE-105	45° L	
TURB GEN BRG #4 X	VE-106		45° R
TURB GEN BRG #4 Y	VE-107	45° L	
TURB GEN BRG #5 X	VE-108		45° R
TURB GEN BRG #5 Y	VE-109	45° L	
TURB GEN KEYφ PROBE 1	VE-110	45° L	
TURB GEN ECCENTRICTY	VE-111	90° L	
TURB GEN TACH PROBE A	VE-112	45° L	
TURB GEN TACH PROBE B	VE-113		45° R
TURB THRUST PROBE 1	VE-114		
TURB THRUST PROBE 2	VE-115		
TURB DIFF EXP PROBE 1	VE-116	109° L	
TURB DIFF EXP PROBE 2	VE-117		109° R

ZONE	LTR	DESCRIPTION	BY	DATE	APPD	DATE

REVISION

UNSPECIFIED TOLERANCES
.3
.010
.15
.005
1.60
63✓

DRAWN	B. MILLSPAW	030CT95
CHECK	R. BAGLIO	030CT95
ENGR	B. MILLSPAW	030CT95
ENG	LUCHSINGER	040CT95
	N/A	N/A

CITY OF GRAND ISLAND
PLATTE GEN. STATION
GRAND ISLAND, NE
UNIT 1

SHEET
APPLICATION

BENTLY NEVADA — MINDEN-NEVADA U.S.A. — LEADER IN PROXIMITY MEASUREMENTS

TURBINE MACHINE TRAIN TRANSDUCER INSTALLATION

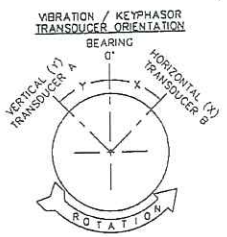
DSK NO.	SIZE	PROJECT NO.
\PROJ\COGI\	A1D	5300669-DIE5669

SCALE	FILE NAME	SHEET
NONE	P1-MT1	1 OF 27

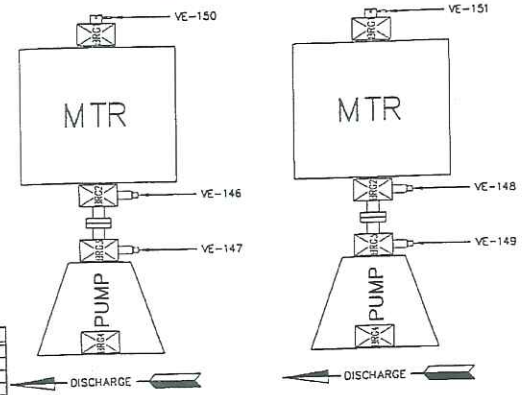
1. REFER TO SHEETS 4-17
NOTES: UNLESS OTHERWISE SPECIFIED

114-13

CIRCULATION WATER PUMPS



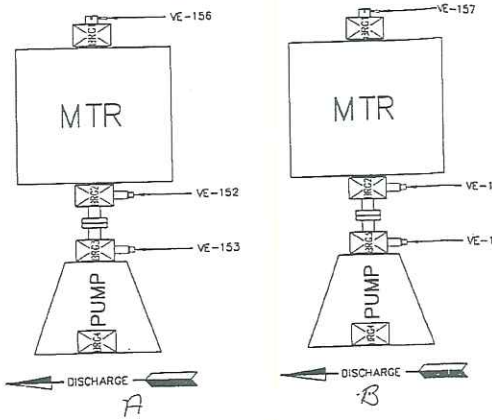
NOTE: AS VIEWED FROM THE DRIVER (MOTOR) LOOKING TOWARDS THE DRIVEN (PUMP)

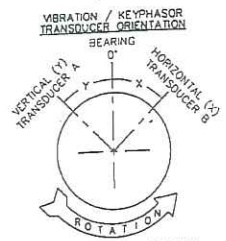


CIRC., COND., AND BOILER FEED PUMPS

LOCATION:	TAG NO.	"Y"	"X"
CIRC PUMP 1A VELO 1	VE-146	0°	
CIRC PUMP 1A VELO 2	VE-147	0°	
CIRC PUMP 1B VELO 1	VE-148	0°	
CIRC PUMP 1B VELO 2	VE-149	0°	
CIRC PUMP 1A KEYΦ	VE-150	11° L	
CIRC PUMP 1B KEYΦ	VE-151	11° L	

CONDENSATE PUMPS



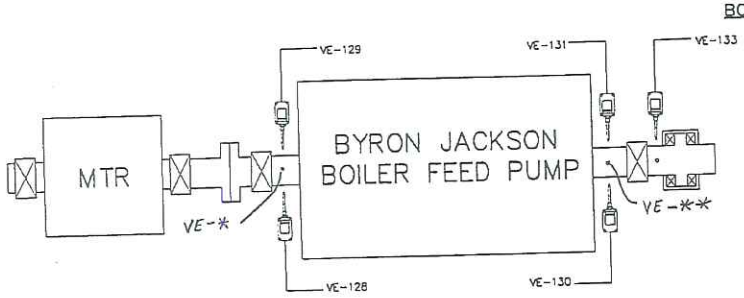


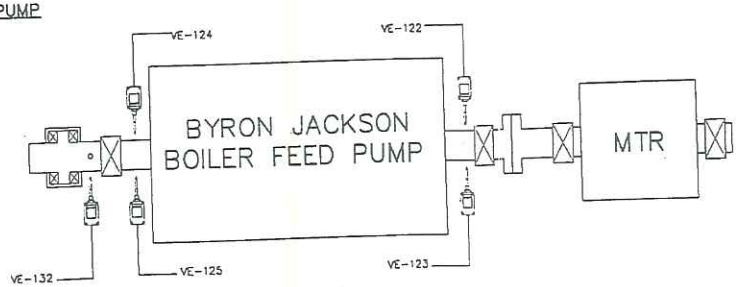
NOTE: AS VIEWED FROM THE DRIVER (MOTOR) LOOKING TOWARDS THE DRIVEN (PUMP)

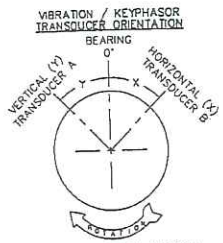
CIRC., COND., AND BOILER FEED PUMPS

LOCATION:	TAG NO.	"Y"	"X"
COND PUMP 1A VELO 1	VE-152	0°	
COND PUMP 1A VELO 2	VE-153	0°	
COND PUMP 1B VELO 1	VE-154	0°	
COND PUMP 1B VELO 2	VE-155	0°	
COND PUMP 1A KEYΦ	VE-156	45° L	
COND PUMP 1B KEYΦ	VE-157	45° L	

BOILER FEED PUMP







NOTE: AS VIEWED FROM THE DRIVER (MOTOR) LOOKING TOWARDS THE DRIVEN (PUMP)

CIRC., COND., AND BOILER FEED PUMPS

LOCATION:	TAG NO.	"Y"	"X"
BF PUMP 1A INBOARD X	VE-122		45° R
BF PUMP 1A INBOURD Y	VE-123	45° L	
BF PUMP 1A OUTBOARD X	VE-124		45° R
BF PUMP 1A OUTBOARD Y	VE-125	45° L	
BF PUMP 1B INBOARD X	VE-128		55° R
BF PUMP 1B INBOARD Y	VE-129	35° L	
BF PUMP 1B OUTBOARD X	VE-130		45° R
BF PUMP 1A OUTBOARD Y	VE-131	45° L	
BF PUMP 1A KEYΦ	VE-132	45° L	
BF PUMP 1B KEYΦ	VE-133	45° L	
BF PUMP 1A VELO 1	VE-*	0°	
BF PUMP 1A VELO 2	VE-**	0°	

1. REFER TO SHEETS 18 THRU 22.

NOTES: UNLESS OTHERWISE SPECIFIED

UNSPECIFIED TOLERANCES
.3
.010
.15
.005
1.60
63 √
1°

ZONE	LTR	DESCRIPTION	BY	DATE	APPD	DATE
REVISION						

DES	B. MILLSPAW	30OCT95
DR	R. BAGLIO	04OCT95
ENGR	B. MILLSPAW	03OCT95
APP	LUCHSINGER	04OCT95
QA	N/A	N/A

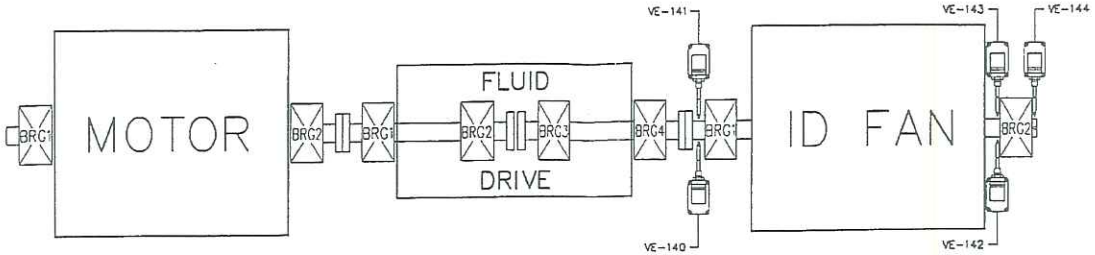
CITY OF GRAND ISLAND
PLATTE GEN. STATION
GRAND ISLAND, NE
UNIT 1

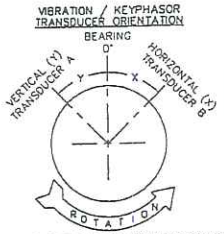
SHEET: APPLICATION

BENTLY NEVADA MINDEN-NEVADA U.S.A.
LEADER IN PROXIMITY MEASUREMENTS

CIRC. WATER, CONDENSATE, AND BOILER FEED PUMP MACHINE TRAINS TRANSDUCER INSTALLATION

DISK NO.	SIZE	PROJECT NO.
\PROJ\COGI\	A1D	5300669-DIE5669
SCALE: NONE	FILE NAME: P1-MT2	SHEET: 2 OF 27

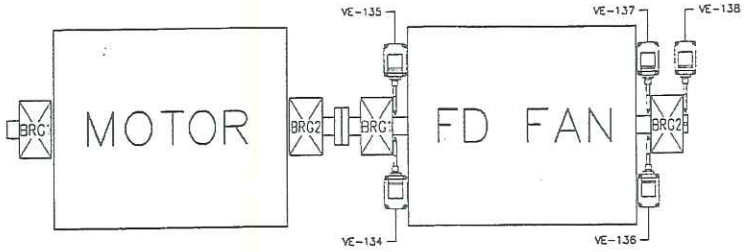


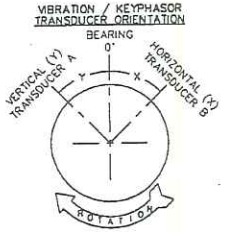


NOTE: AS VIEWED FROM THE DRIVER (MOTOR) LOOKING TOWARDS THE DRIVEN (FAN)

INDUCED DRAFT FAN

LOCATION:	TAG NO. Y/X	"Y"	"X"
ID FAN INBD REL. VIB.	VE-141/VE-140	45° L	45° R
ID FAN OUTBD REL. VIB.	VE-143/VE-142	45° L	45° R
ID FAN KEYPHASOR	VE-144	45° L	





NOTE: AS VIEWED FROM THE DRIVER (MOTOR) LOOKING TOWARDS THE DRIVEN (FAN)

FORCED DRAFT FAN

LOCATION:	TAG NO. Y/X	"Y"	"X"
FD FAN INBD REL. VIB.	VE-135/VE-134	45° L	45° R
FD FAN OUTBD REL. VIB.	VE-137/VE-136	45° L	45° R
FD FAN KEYPHASOR	VE-138	45° L	

1. REFER TO SHEETS 23 THRU 27 FOR MACHINE MODIFICATIONS.

NOTES: UNLESS OTHERWISE SPECIFIED

UNSPECIFIED TOLERANCES
X = ± .3
XX = ± .010
XXX = ± .005
ANGLES ± 1°
FINISHED SURFACES 63

ZONE	LTR	DESCRIPTION	BY	DATE	APPD	DATE

REVISION

DRAWN	R. BAGLIO	02OCT95
DSGN	HENDERSON	27SEP95
FROM	R. BAGLIO	26SEP95
APPD	LUCHSINGER	03OCT95
CHKD	N/A	N/A
NEXT ASSY	NONE	
APPLICATION		

CITY OF GRAND ISLAND
PLATTE GEN. STATION
GRAND ISLAND, NE
UNIT 1

BENTLY NEVADA MINDEN-NEVADA U.S.A. LEADER IN PROXIMITY MEASUREMENTS

MACHINE TRAIN OVERVIEW
ID AND FD FANS - TRANSDUCER LOCATION AND ORIENTATION

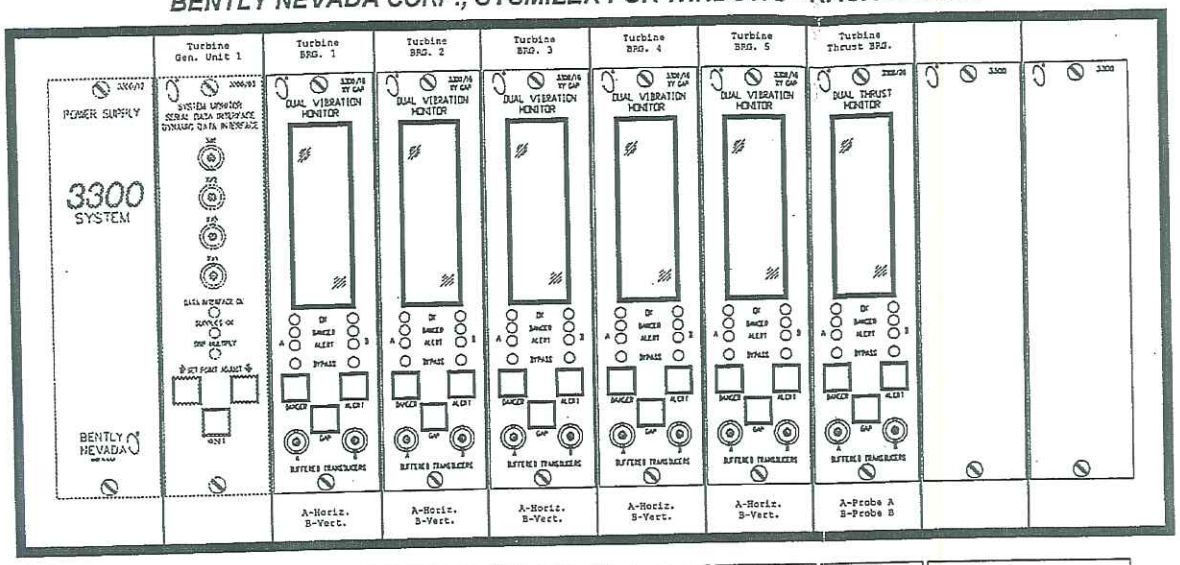
DSN NO.	SIZE	PROJECT NO.
\P:PROJ\COGI\	A1D	5300669-DIE5669
SCALE: NONE	FILE NAME: P1-MT3	SHEET: 3 OF 27

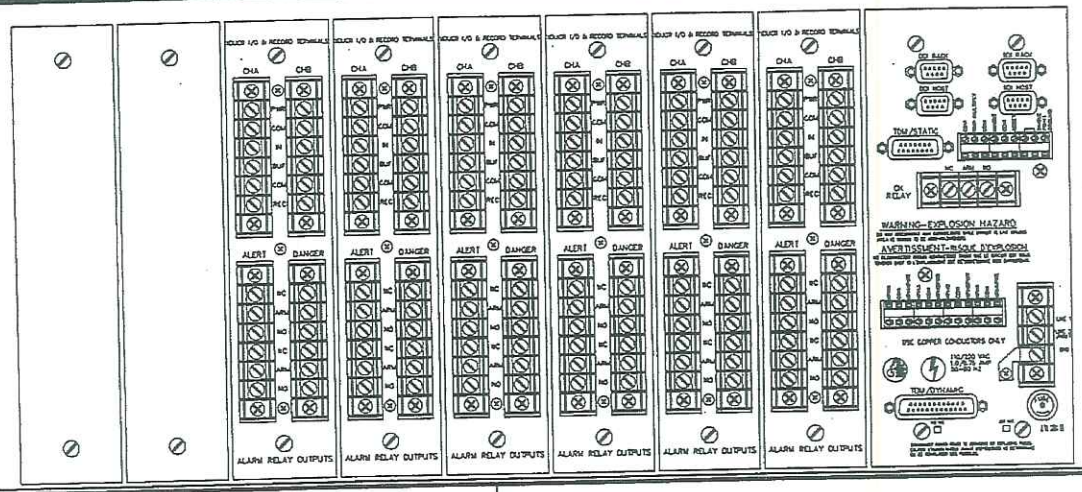
SYSMIZER FOR WINDOWS, 2.0

BENTLY NEVADA CORP., 1994

CUSTOMER:City of Grand Island, NE.					PROJECT:Platte Generating Station		
DATE: 18 December, 1995		SYSTEM DESCRIPTION:TSI System #1				BY:kld	MACHINE TRAIN:Turbine Generator #1
POS	PART NUMBER	FULL SCALE RANGE	RELAYS	APPROVLS	TRSDCR	BARRIER	TAGGING/OTHER INFORMATION
RACK	Rack 3300/05-24-00-00	NA	NA	NONE	NA	NONE	
WP HSNG	NONE	NA	NA	NA	NA	NA	
1	AC Power Supply 3300/12-01-20-00	95-125 Vac	NA	NONE	NA	NONE	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
2	Dynamic Data Intrfc. Sys. Mntr 3300/03-03-00	NA	NA	NONE	NA	NA	Line 1:=TOP=Turbine;BOTTOM= Line 2:=TOP=Gen. Unit 1;BOTTOM= Line 3:=TOP=;BOTTOM=
3	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=Turbine;BOTTOM=A-Horiz. Line 2:=TOP=BRG. 1;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
4	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=Turbine;BOTTOM=A-Horiz. Line 2:=TOP=BRG. 2;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
5	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=Turbine;BOTTOM=A-Horiz. Line 2:=TOP=BRG. 3;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
6	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=Turbine;BOTTOM=A-Horiz. Line 2:=TOP=BRG. 4;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
7	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=Turbine;BOTTOM=A-Horiz. Line 2:=TOP=BRG. 5;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
8	Dual Thrust Position 3300/20-03-01-02-00-00	40-0-40 mils	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=Turbine;BOTTOM=A-Probe A Line 2:=TOP=Thrust BRG.;BOTTOM=B-Probe B Line 3:=TOP=;BOTTOM=
9	Blank Panel	NA NA	NA	NA	NA	NA	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
10	Blank Panel	NA NA	NA	NA	NA	NA	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=

BENTLY NEVADA CORP., SYSMIZER FOR WINDOWS - RACK LAYOUT





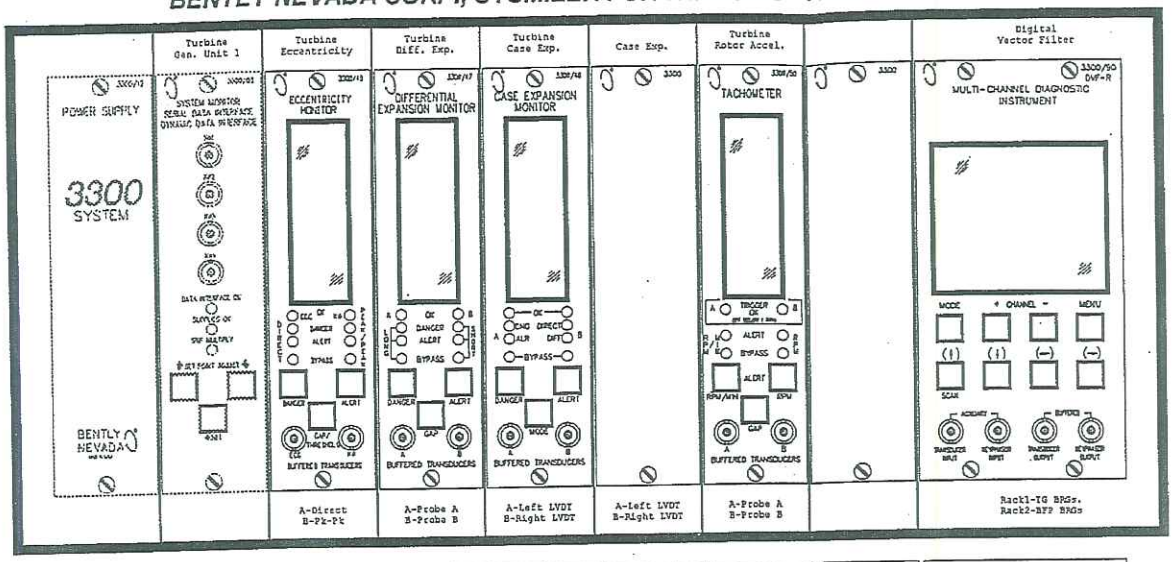
CUSTOMER:City of Grand Island, NE.		PROJECT:Platte Generating Station	
DATE: 18 December, 1995	SYSTEM DESCRIPTION:TSI System #1	BY:kld	MACHINE TRAIN:Turbine Generator #1

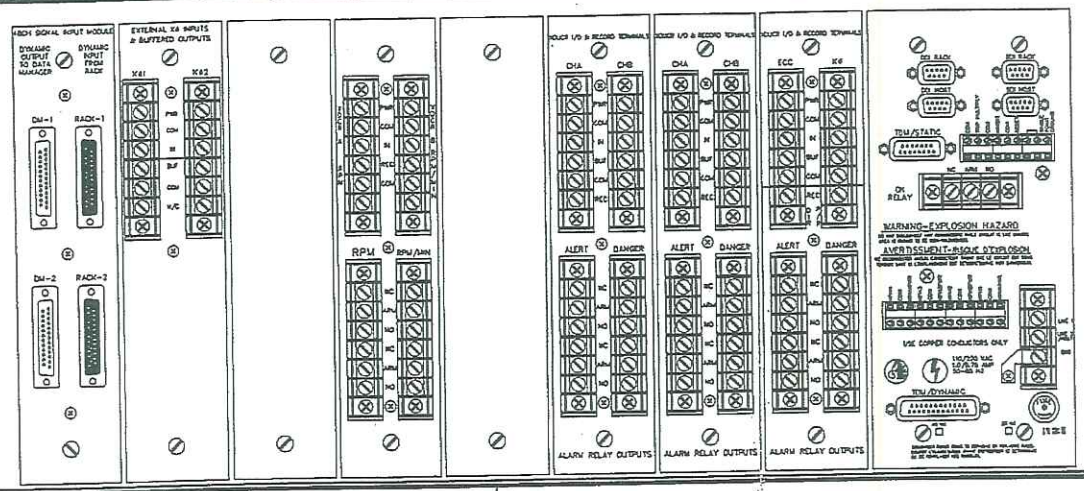
SYSMIZER FOR WINDOWS, 2.0

BENTLY NEVADA CORP., 1994

CUSTOMER:City of Grand Island, NE.					PROJECT:Platte Generating Station		
DATE: 18 December, 1995		SYSTEM DESCRIPTION:TSI System #2				BY:kld	MACHINE TRAIN:Turbine Generator #1
POS	PART NUMBER	FULL SCALE RANGE	RELAYS	APPROVLS	TRSDCR	BARRIER	TAGGING/OTHER INFORMATION
RACK	Rack 3300/05-24-00-00	NA	NA	NONE	NA	NONE	
WP HSNG	NONE	NA	NA	NA	NA	NA	
1	AC Power Supply 3300/12-01-20-00	95-125 Vac	NA	NONE	NA	NONE	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
2	Dynamic Data Intrfc. Sys. Mntr 3300/03-03-00	NA	NA	NONE	NA	NA	Line 1:=TOP=Turbine;BOTTOM= Line 2:=TOP=Gen. Unit 1;BOTTOM= Line 3:=TOP=;BOTTOM=
3	Eccentricity Monitor 3300/40-02-01-02-00-00	0-10 mils PP 10-0-10 mils	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=Turbine;BOTTOM=A-Direct Line 2:=TOP=Eccentricity;BOTTOM=B-Pk-Pk Line 3:=TOP=;BOTTOM=
4	Comp. Input Diff. Expnsn. 3300/47-09-03-02-00	0.5-0-0.5 inch	HERMETIC	NONE	25 mm	N/A	Line 1:=TOP=Turbine;BOTTOM=A-Probe A Line 2:=TOP=Diff. Exp.;BOTTOM=B-Probe B Line 3:=TOP=;BOTTOM=
5	Case Expansion Monitor 3300/48-01-01-02-00	0-1 Inch	HERMETIC	NONE	1in LVDT	NA	Line 1:=TOP=Turbine;BOTTOM=A-Left LVDT Line 2:=TOP=Case Exp.;BOTTOM=B-Right LVDT Line 3:=TOP=;BOTTOM=
6	Blank Panel	NA NA	NA	NA	NA	NA	Line 1:=TOP=;BOTTOM=A-Left LVDT Line 2:=TOP=Case Exp.;BOTTOM=B-Right LVDT Line 3:=TOP=;BOTTOM=
7	Rotor Acceleration Tach 3300/50-02-02-00-00	N/A	HERMETIC	NONE	N/A	NONE	Line 1:=TOP=Turbine;BOTTOM=A-Probe A Line 2:=TOP=Rotor Accel.;BOTTOM=B-Probe B Line 3:=TOP=;BOTTOM=
8	Blank Panel	NA NA	NA	NA	NA	NA	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
9	Multi-channel Diagnostc 3300/90-00-00	NA	NA	NONE	NA	NONE	Line 1:=TOP=Digital;BOTTOM=Rack1-TG BRGs. Line 2:=TOP=Vector Filter;BOTTOM=Rack2-BFP BRGs Line 3:=TOP=;BOTTOM=
10	2ND POSITION FOR (2) POSITION MONITOR SELECTED ABOVE						

BENTLY NEVADA CORP., SYSMIZER FOR WINDOWS - RACK LAYOUT





CUSTOMER:City of Grand Island, NE.		PROJECT:Platte Generating Station	
DATE: 18 December, 1995	SYSTEM DESCRIPTION:TSI System #2	BY:kld	MACHINE TRAIN:Turbine Generator #1

SYSMIZER FOR WINDOWS, 2.0

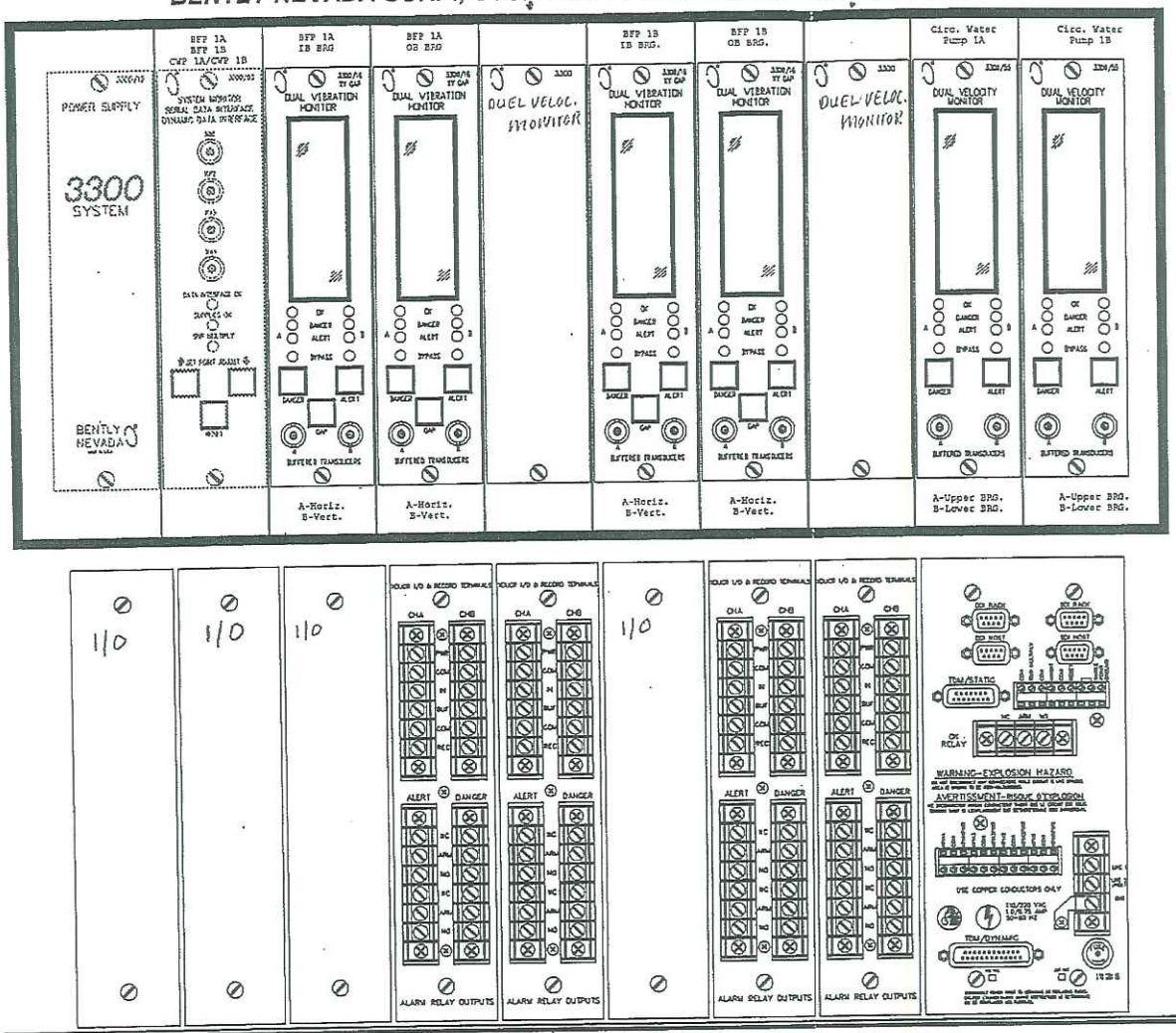
BENTLY NEVADA CORP., 1994

CUSTOMER:City of Grand Island, NE. | PROJECT:Platte Generating Station

DATE: 18 December, 1995 | SYSTEM DESCRIPTION:Aux. System #3 | BY:kld | MACHINE TRAIN:Boiler Feed Pumps 1A&1B/Circulation Water Pumps 1A&1B

POS	PART NUMBER	FULL SCALE RANGE	RELAYS	APPROVLS	TRSDCR	BARRIER	TAGGING/OTHER INFORMATION
RACK	Rack 3300/05-24-00-00	NA	NA	NONE	NA	NONE	
WP HSNG	NONE	NA	NA	NA	NA	NA	
1	AC Power Supply 3300/12-01-20-00	95-125 Vac	NA	NONE	NA	NONE	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
2	Dynamic Data Intrfc. Sys. Matr 3300/03-03-00	NA	NA	NONE	NA	NA	Line 1:=TOP=BFP 1A;BOTTOM= Line 2:=TOP=BFP 1B;BOTTOM= Line 3:=TOP=CWP 1A/CWP 1B;BOTTOM=
3	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-30 ~~0-10~~ mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=BFP 1A;BOTTOM=A-Horiz. Line 2:=TOP=1B BRG;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
4	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=BFP 1A;BOTTOM=A-Horiz. Line 2:=TOP=OB BRG;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
5	~~Bently-Nevad~~ Duel Velocity Monitor	~~NA~~ ~~NA~~ 0-1 mils PK-PK	NA	NA	NA	NA	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
6	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=BFP 1B;BOTTOM=A-Horiz. Line 2:=TOP=1B BRG.;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
7	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-00	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=BFP 1B;BOTTOM=A-Horiz. Line 2:=TOP=OB BRG.;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
8	~~Bently-Nevad~~ Duel Velocity Monitor	~~NA~~ ~~NA~~ 0-1 mils PK-PK	NA	NA	NA	NA	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
9	Dual Velocity Monitor 3300/55-03-04-05-05-00-00-01	0-10 mils pk-pk 0-10 mils pk-pk	NA	NONE	Velomitr	NONE	Line 1:=TOP=Circ. Water;BOTTOM=A-Upper BRG. Line 2:=TOP=Pump 1A;BOTTOM=B-Lower BRG. Line 3:=TOP=;BOTTOM=
10	Dual Velocity Monitor 3300/55-03-04-05-05-00-00-01	0-10 mils pk-pk 0-10 mils pk-pk	NA	NONE	Velomitr	NONE	Line 1:=TOP=Circ. Water;BOTTOM=A-Upper BRG. Line 2:=TOP=Pump 1B;BOTTOM=B-Lower BRG. Line 3:=TOP=;BOTTOM=

BENTLY NEVADA CORP., SYSMIZER FOR WINDOWS - RACK LAYOUT



CUSTOMER:City of Grand Island, NE.		PROJECT:Platte Generating Station	
DATE: 18 December, 1995	SYSTEM DESCRIPTION:Aux. System #3	BY:kld	MACHINE TRAIN:Boiler Feed Pumps 1A&1B/Circulation Water Pumps 1A&1B

SYSMIZER FOR WINDOWS, 2.0

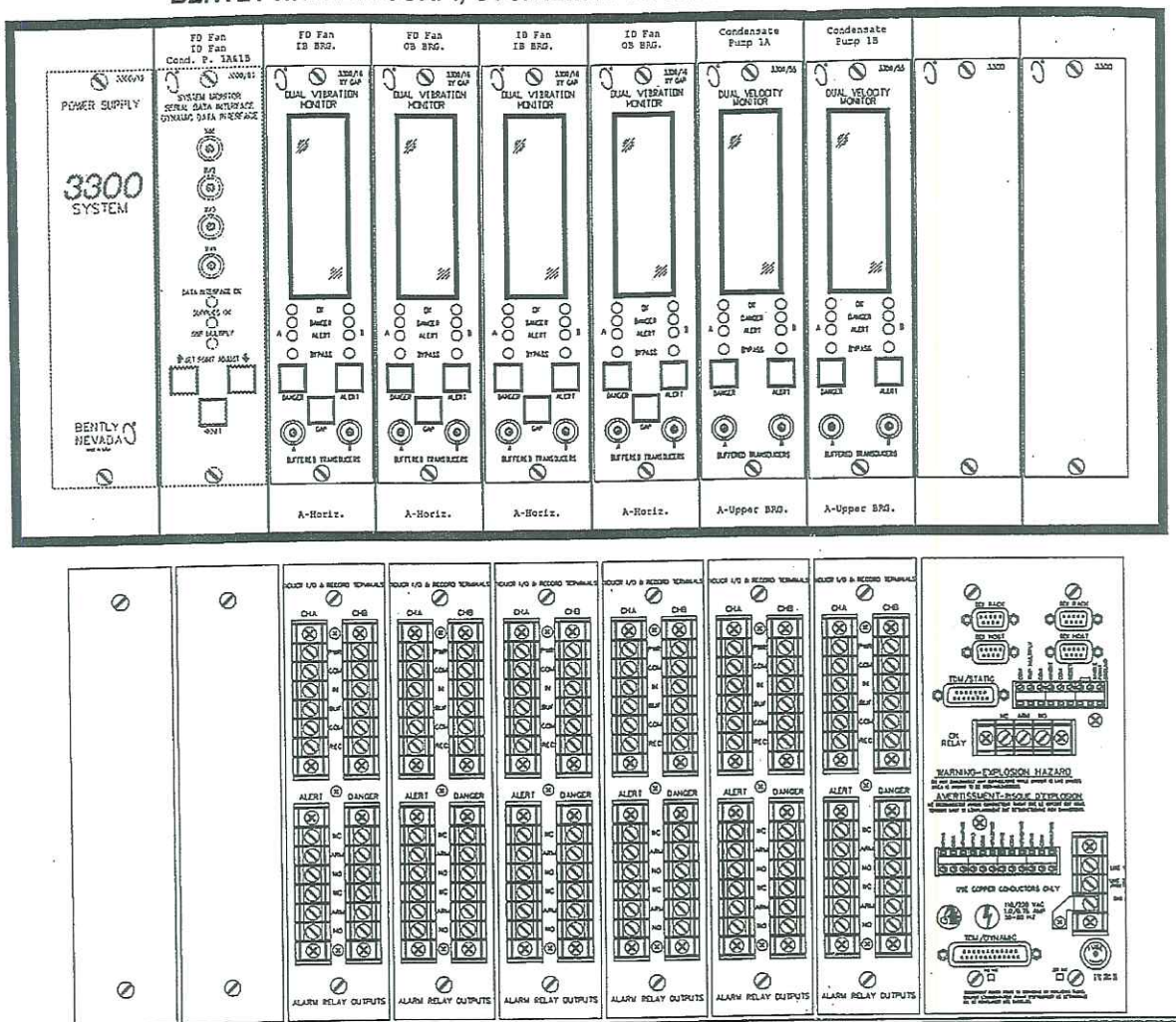
BENTLY NEVADA CORP., 1994

CUSTOMER: City of Grand Island, NE. | PROJECT: Platte Generating Station

DATE: 18 December, 1995 | SYSTEM DESCRIPTION: System #4 | BY: kld | MACHINE TRAIN: ID&FD Fans/Condensate Pumps 1A&1B

POS	PART NUMBER	FULL SCALE RANGE	RELAYS	APPROVLS	TRSDCR	BARRIER	TAGGING/OTHER INFORMATION
RACK	Rack 3300/05-24-00-00	NA	NA	NONE	NA	NONE	
WP HSNG	NONE	NA	NA	NA	NA	NA	
1	AC Power Supply 3300/12-01-20-00	95-125 Vac	NA	NONE	NA	NONE	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
2	Dynamic Data Intrfc. Sys. Mntr 3300/03-03-00	NA	NA	NONE	NA	NA	Line 1:=TOP=FD Fan;BOTTOM= Line 2:=TOP=ID Fan;BOTTOM= Line 3:=TOP=Cond. P. 1A&1B;BOTTOM=
3	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-02	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=FD Fan;BOTTOM=A-Horiz. Line 2:=TOP=IB BRG.;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
4	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-02	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=FD Fan;BOTTOM=A-Horiz. Line 2:=TOP=OB BRG.;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
5	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-02	0-10 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=ID Fan;BOTTOM=A-Horiz. Line 2:=TOP=IB BRG.;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
6	X\Y GAP Dual Vibration 3300/16-03-01-02-00-00-02	0-20 mils PK-PK	HERMETIC	NONE	33 7200	NONE	Line 1:=TOP=ID Fan;BOTTOM=A-Horiz. Line 2:=TOP=OB BRG.;BOTTOM=B-Vert. Line 3:=TOP=;BOTTOM=
7	Dual Velocity Monitor 3300/55-03-04-05-05-00-00-00	0-10 mils pk-pk 0-10 mils pk-pk	NA	NONE	Velomitr	NONE	Line 1:=TOP=Condensate;BOTTOM=A-Upper BRG. Line 2:=TOP=Pump 1A;BOTTOM=B-Lower BRG. Line 3:=TOP=;BOTTOM=
8	Dual Velocity Monitor 3300/55-03-04-05-05-00-00-00	0-10 mils pk-pk 0-10 mils pk-pk	NA	NONE	Velomitr	NONE	Line 1:=TOP=Condensate;BOTTOM=A-Upper BRG. Line 2:=TOP=Pump 1B;BOTTOM=B-Lower BRG. Line 3:=TOP=;BOTTOM=
9	Blank Panel	NA NA	NA	NA	NA	NA	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=
10	Blank Panel	NA NA	NA	NA	NA	NA	Line 1:=TOP=;BOTTOM= Line 2:=TOP=;BOTTOM= Line 3:=TOP=;BOTTOM=

BENTLY NEVADA CORP., SYSMIZER FOR WINDOWS - RACK LAYOUT



CUSTOMER:City of Grand Island, NE.		PROJECT:Platte Generating Station	
DATE: 18 December, 1995	SYSTEM DESCRIPTION:System #4	BY:kld	MACHINE TRAIN:ID&FD Fans/Condensate Pumps 1A&1B

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Modbus Interface Database
City of Grand Island
Gateway 2 - Bentley-Nevada

Tagname	Description	Point Type	PLC #	PLC Location	Data Flow	Bailey Block	Scale Factor	Offset
1TGTURBALM01G2	TURBNE BEARING 1 VIBRATION	D	001	10001	->DCS	101	1.00	0.0000
1TGTURBALM02G2	TURBNE BEARING 1 VIBRATION	D	001	10002	->DCS	102	1.00	0.0000
SPR-10003-001	SPARE REGISTER 001 10003	D	001	10003	->DCS	103	1.00	0.0000
1TGTURBALM03G2	TURBNE BEARING 2 VIBRATION	D	001	10004	->DCS	104	1.00	0.0000
1TGTURBALM04G2	TURBNE BEARING 2 VIBRATION	D	001	10005	->DCS	105	1.00	0.0000
SPR-10006-001	SPARE REGISTER 001 10006	D	001	10006	->DCS	106	1.00	0.0000
1TGTURBALM05G2	TURBNE BEARING 3 VIBRATION	D	001	10007	->DCS	107	1.00	0.0000
1TGTURBALM06G2	TURBNE BEARING 3 VIBRATION	D	001	10008	->DCS	108	1.00	0.0000
SPR-10009-001	SPARE REGISTER 001 10009	D	001	10009	->DCS	109	1.00	0.0000
1TGTURBALM07G2	TURBNE BEARING 4 VIBRATION	D	001	10010	->DCS	110	1.00	0.0000
1TGTURBALM08G2	TURBNE BEARING 4 VIBRATION	D	001	10011	->DCS	111	1.00	0.0000
SPR-10012-001	SPARE REGISTER 001 10012	D	001	10012	->DCS	112	1.00	0.0000
1TGTURBALM09G2	TURBNE BEARING 5 VIBRATION	D	001	10013	->DCS	113	1.00	0.0000
1TGTURBALM10G2	TURBNE BEARING 5 VIBRATION	D	001	10014	->DCS	114	1.00	0.0000
SPR-10015-001	SPARE REGISTER 001 10015	D	001	10015	->DCS	115	1.00	0.0000
1TGTURBALM11G2	TURBNE THRUST BEARING VIBRATIO	D	001	10016	->DCS	116	1.00	0.0000
1TGTURBALM12G2	TURBNE THRUST BEARING VIBRATIO	D	001	10017	->DCS	117	1.00	0.0000
1TGTURBV1XG2	TURBINE BEARING 1 X VIBRATION	A	001	30101	->DCS	201	1.00	0.0000
SPR-30102	SPARE REGISTER 001 30102	A	001	30102	->DCS	202	1.00	0.0000
1TGTURBV1YG2	TURBINE BEARING 1 Y VIBRATION	A	001	30103	->DCS	203	1.00	0.0000
SPR-30104	SPARE REGISTER 001 30104	A	001	30104	->DCS	204	1.00	0.0000
1TGTURBV2XG2	TURBINE BEARING 2 X VIBRATION	A	001	30117	->DCS	205	1.00	0.0000
SPR-30118	SPARE REGISTER 001 30118	A	001	30118	->DCS	206	1.00	0.0000
1TGTURBV2YG2	TURBINE BEARING 2 Y VIBRATION	A	001	30119	->DCS	207	1.00	0.0000
1TGTURBV3XG2	TURBINE BEARING 3 X VIBRATION	A	001	30133	->DCS	208	1.00	0.0000
SPR-30134	SPARE REGISTER 001 30134	A	001	30134	->DCS	209	1.00	0.0000
1TGTURBV3YG2	TURBINE BEARING 3 Y VIBRATION	A	001	30135	->DCS	210	1.00	0.0000
1TGTURBV4XG2	TURBINE BEARING 4 X VIBRATION	A	001	30149	->DCS	211	1.00	0.0000
SPR-30150	SPARE REGISTER 001 30150	A	001	30150	->DCS	212	1.00	0.0000
1TGTURBV4YG2	TURBINE BEARING 4 Y VIBRATION	A	001	30151	->DCS	213	1.00	0.0000
1TGTURBV5XG2	TURBINE BEARING 5 X VIBRATION	A	001	30165	->DCS	214	1.00	0.0000
SPR-30166	SPARE REGISTER 001 30166	A	001	30166	->DCS	215	1.00	0.0000
1TGTURBV5YG2	TURBINE BEARING 5 Y VIBRATION	A	001	30167	->DCS	216	1.00	0.0000
~~1TGTURBVTG2~~ 1TGTURBVTP1G2	TURB THRUST BEARING PROBE 1 VI	A	001	30181	->DCS	217	1.00	0.0000
SPR-30182	SPARE REGISTER 001 30182	A	001	30182	->DCS	218	1.00	0.0000
~~1TGTURBVTG2~~ 1TGTURBVTP2G2	TURB THRUST BEARING PROBE 2 VI	A	001	30183	->DCS	219	1.00	0.0000
PLC_STATUS_001	PLC STATUS 001	A	001	30999	->DCS	220	1.00	0.0000
1TGTURBALM13G2	TURBNE ECCENTRICITY	D	002	10001	->DCS	301	1.00	0.0000
1TGTURBALM14G2	TURBNE ECCENTRICITY	D	002	10002	->DCS	302	1.00	0.0000
SPR-10003-002	SPARE REGISTER 002 10003	D	002	10003	->DCS	303	1.00	0.0000
1TGTURBALM15G2	TURBNE DIFFERENTIAL EXPANSION	D	002	10004	->DCS	304	1.00	0.0000
1TGTURBALM16G2	TURBINE DIFFERENTIAL EXPANSION	D	002	10005	->DCS	305	1.00	0.0000
SPR-10006-002	SPARE REGISTER 002 10006	D	002	10006	->DCS	306	1.00	0.0000
1TGTURBALM17G2	TURBNE CASE EXPANSION	D	002	10007	->DCS	307	1.00	0.0000
1TGTURBALM18G2	TURBNE CASE EXPANSION	D	002	10008	->DCS	308	1.00	0.0000
SPR-10009-002	SPARE REGISTER 002 10009	D	002	10009	->DCS	309	1.00	0.0000
SPR-10010-002	SPARE REGISTER 002 10010	D	002	10010	->DCS	310	1.00	0.0000
SPR-10011-002	SPARE REGISTER 002 10011	D	002	10011	->DCS	311	1.00	0.0000

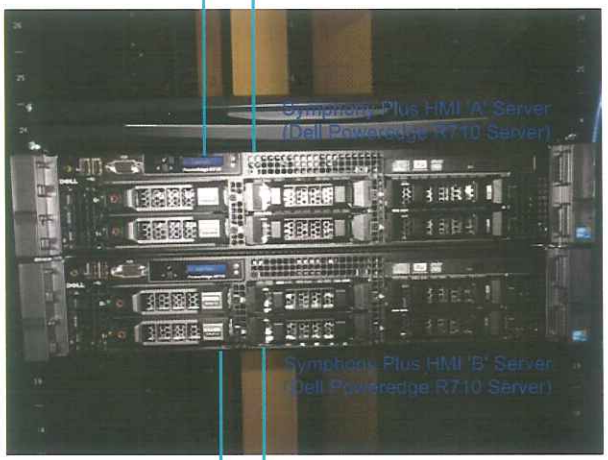
Modbus Interface Database
City of Grand Island
Gateway 2 - Bentley-Nevada

Tagname	Description	Point Type	PLC #	PLC Location	Data Flow	Bailey Block	Scale Factor	Offset
SPR-10012-002	SPARE REGISTER 002 10012	D	002	10012	->DCS	312	1.00	0.0000
1TGTURBALM19G2	TURBNE SPEED HIGH	D	002	10013	->DCS	313	1.00	0.0000
1TGTURBALM20G2	TURBINE ACCELERATION HIGH	D	002	10014	->DCS	314	1.00	0.0000
1TGTURBECCG2	TURBINE ECCENTRICITY DIRECT	A	002	30102	->DCS	401	1.00	0.0000
1TGTURBDEXPG2	TURBINE DIFFERENTIAL EXPANSION	A	002	30117	->DCS	402	1.00	0.0000
1TGTURBCEXPG2	TURBINE CASE EXPANSION DIFFERE	A	002	30133	->DCS	403	1.00	0.0000
1TGTURBUVPOSG2	TURBINE UPPER CNTL VLV POSITIO	A	002	30149	->DCS	404	1.00	0.0000
1TGTURBLVPOSG2	TURBINE LOWER CNTL VLV POSITIO	A	002	30150	->DCS	405	1.00	0.0000
1TGTURBSPEEDG2	TURBINE SPEED	A	002	30165	->DCS	~~496~~ 4000	1.00	0.0000
SPR-30166-002	SPARE REGISTER 002 30166	A	002	30166	->DCS	407	1.00	0.0000
~~1TGTACCELG1~~ 1TGTACCELG2	TURBINE ACCELERATION	A	002	30167	->DCS	408	1.00	0.0000
PLC_STATUS_002	PLC STATUS 002	A	002	30999	->DCS	409	1.00	0.0000
1BFBFPAALM1G2	BFP 1A INBOARD BEARING VIB	D	003	10001	->DCS	501	1.00	0.0000
1BFBFPAALM2G2	BFP 1A INBOARD BEARING VIB	D	003	10002	->DCS	502	1.00	0.0000
SPR-10003-003	SPARE REGISTER 003 10003	D	003	10003	->DCS	503	1.00	0.0000
1BFBFPAALM3G2	BFP 1A OUTBOARD BEARING VIB	D	003	10004	->DCS	504	1.00	0.0000
1BFBFPAALM4G2	BFP 1A OUTBOARD BEARING VIB	D	003	10005	->DCS	505	1.00	0.0000
1BFBFPAALM5G2	BFP 1A THRUST BEARING VIBRATIO	D	003	10007	->DCS	506	1.00	0.0000
1BFBFPAALM6G2	BFP 1A THRUST BEARING VIBRATIO	D	003	10008	->DCS	507	1.00	0.0000
SPR-10009-003	SPARE REGISTER 003 10009	D	003	10009	->DCS	508	1.00	0.0000
1BFBFPBALM1G2	BFP 1B INBOARD BEARING VIB	D	003	10010	->DCS	509	1.00	0.0000
1BFBFPBALM2G2	BFP 1B INBOARD BEARING VIB	D	003	10011	->DCS	510	1.00	0.0000
SPR-10012-003	SPARE REGISTER 003 10012	D	003	10012	->DCS	511	1.00	0.0000
1BFBFPBALM3G2	BFP 1B OUTBOARD BEARING VIB	D	003	10013	->DCS	512	1.00	0.0000
1BFBFPBALM4G2	BFP 1B OUTBOARD BEARING VIB	D	003	10014	->DCS	513	1.00	0.0000
SPR-10015-003	SPARE REGISTER 003 10015	D	003	10015	->DCS	514	1.00	0.0000
1BFBFPBALM5G2	BFP 1B THRUST BEARING VIBRATIO	D	003	10016	->DCS	515	1.00	0.0000
1BFBFPBALM6G2	BFP 1B THRUST BEARING VIBRATIO	D	003	10017	->DCS	516	1.00	0.0000
SPR-10018-003	SPARE REGISTER 003 10018	D	003	10018	->DCS	517	1.00	0.0000
1CRCRCPAALM1G2	CIRC WATER PUMP 1A VIBRATION	D	003	10019	->DCS	518	1.00	0.0000
1CRCRCPAALM2G2	CIRC WATER PUMP 1A VIBRATION	D	003	10020	->DCS	519	1.00	0.0000
SPR-10021-003	SPARE REGISTER 003 10021	D	003	10021	->DCS	520	1.00	0.0000
1CRCRCPBALM1G2	CIRC WATER PUMP 1B VIBRATION	D	003	10022	->DCS	521	1.00	0.0000
1CRCRCPBALM2G2	CIRC WATER PUMP 1B VIBRATION	D	003	10023	->DCS	522	1.00	0.0000
1BFBFPAVIXG2	BFP 1A INBOARD BEARING X VIB	A	003	30101	->DCS	601	1.00	0.0000
SPR-30102-003	SPARE REGISTER 003 30102	A	003	30102	->DCS	602	1.00	0.0000
1BFBFPAVIYG2	BFP 1A INBOARD BEARING Y VIB	A	003	30103	->DCS	603	1.00	0.0000
1BFBFPAVOXG2	BFP 1A OUTBOARD BEARING X VIB	A	003	30117	->DCS	604	1.00	0.0000
SPR-30118-003	SPARE REGISTER 003 30118	A	003	30118	->DCS	605	1.00	0.0000
1BFBFPAVOYG2	BFP 1A OUTBOARD BEARING Y VIB	A	003	30119	->DCS	606	1.00	0.0000
1BFBFPAVTG2	BFP 1A THRUST BEARING VIBRATIO	A	003	30133	->DCS	607	1.00	0.0000
1BFBFPBVIXG2	BFP 1B INBOARD BEARING X VIB	A	003	30149	->DCS	608	1.00	0.0000
SPR-30150-003	SPARE REGISTER 003 30150	A	003	30150	->DCS	609	1.00	0.0000
1BFBFPBVIYG2	BFP 1B INBOARD BEARING Y VIB	A	003	30151	->DCS	610	1.00	0.0000
1BFBFPBVOXG2	BFP 1B OUTBOARD BEARING X VIB	A	003	30165	->DCS	611	1.00	0.0000
SPR-30166-003	SPARE REGISTER 003 30166	A	003	30166	->DCS	612	1.00	0.0000
1BFBFPBVOYG2	BFP 1B OUTBOARD BEARING Y VIB	A	003	30167	->DCS	613	1.00	0.0000
1BFBFPBVTG2	BFP 1B THRUST BEARING VIBRATIO	A	003	30181	->DCS	614	1.00	0.0000

Modbus Interface Database
City of Grand Island
Gateway 2 - Bentley-Nevada

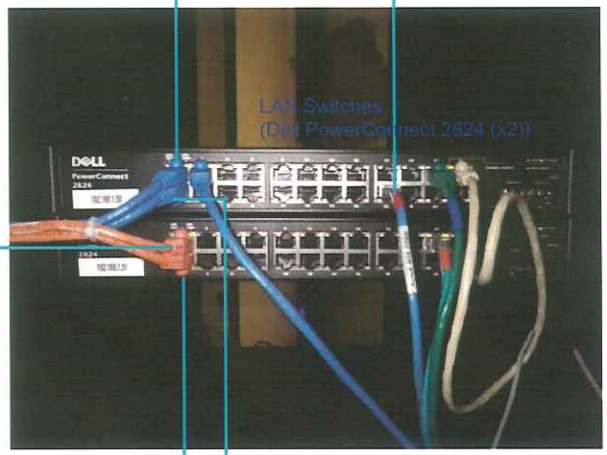
Tagname	Description	Point Type	PLC #	PLC Location	Data Flow	Bailey Block	Scale Factor	Offset
1CRCIRCPAVP1G2	CIRC WATER PUMP 1A PROBE 1 VIB	A	003	30197	->DCS	615	1.00	0.0000
1CRCIRCPAVP2G2	CIRC WATER PUMP 1A PROBE 2 VIB	A	003	30198	->DCS	616	1.00	0.0000
1CRCIRCPBVP1G2	CIRC WATER PUMP 1B PROBE 1 VIB	A	003	30213	->DCS	617	1.00	0.0000
1CRCIRCPBVP2G2	CIRC WATER PUMP 1B PROBE 2 VIB	A	003	30214	->DCS	618	1.00	0.0000
PLC_STATUS_003	PLC STATUS 003	A	003	30999	->DCS	619	1.00	0.0000
1CAFDFALM1G2	FD FAN INBOARD BEARING VIB	D	004	10001	->DCS	701	1.00	0.0000
1CAFDFALM2G2	FD FAN INBOARD BEARING VIB	D	004	10002	->DCS	702	1.00	0.0000
SPR-10003-004	SPARE REGISTER 004 10003	D	004	10003	->DCS	703	1.00	0.0000
1CAFDFALM3G2	FD FAN OUTBOARD BEARING VIB	D	004	10004	->DCS	704	1.00	0.0000
1CAFDFALM4G2	FD FAN OUTBOARD BEARING VIB	D	004	10005	->DCS	705	1.00	0.0000
SPR-10006-004	SPARE REGISTER 004 10006	D	004	10006	->DCS	706	1.00	0.0000
1FGIDFALM1G2	ID FAN INBOARD BEARING VIB	D	004	10007	->DCS	707	1.00	0.0000
1FGIDFALM2G2	ID FAN INBOARD BEARING VIB	D	004	10008	->DCS	708	1.00	0.0000
SPR-10009-004	SPARE REGISTER 004 10009	D	004	10009	->DCS	709	1.00	0.0000
1FGIDFALM3G2	ID FAN OUTBOARD BEARING VIB	D	004	10010	->DCS	710	1.00	0.0000
1FGIDFALM4G2	ID FAN OUTBOARD BEARING VIB	D	004	10011	->DCS	711	1.00	0.0000
SPR-10012-004	SPARE REGISTER 004 10012	D	004	10012	->DCS	712	1.00	0.0000
1CNCNDPAALM1G2	CONDENSATE PUMP 1A VIBRATION	D	004	10013	->DCS	713	1.00	0.0000
1CNCNDPAALM2G2	CONDENSATE PUMP 1A VIBRATION	D	004	10014	->DCS	714	1.00	0.0000
SPR-10015-004	SPARE REGISTER 004 10015	D	004	10015	->DCS	715	1.00	0.0000
1CNCNDPBALM1G2	CONDENSATE PUMP 1B VIBRATION	D	004	10016	->DCS	716	1.00	0.0000
1CNCNDPBALM2G2	CONDENSATE PUMP 1B VIBRATION	D	004	10017	->DCS	717	1.00	0.0000
1CAFDFVIXG2	FD FAN INBOARD BEARING X VIB	A	004	30101	->DCS	801	1.00	0.0000
SPR-30102-004	SPARE REGISTER 004 30102	A	004	30102	->DCS	802	1.00	0.0000
1CAFDFVIYG2	FD FAN INBOARD BEARING Y VIB	A	004	30103	->DCS	803	1.00	0.0000
1CAFDFVOXG2	FD FAN OUTBOARD BEARING X VIB	A	004	30117	->DCS	804	1.00	0.0000
SPR-30118-004	SPARE REGISTER 004 30118	A	004	30118	->DCS	805	1.00	0.0000
1CAFDFVOYG2	FD FAN OUTBOARD BEARING Y VIB	A	004	30119	->DCS	806	1.00	0.0000
1FGIDFVIXG2	ID FAN INBOARD BEARING X VIB	A	004	30133	->DCS	807	1.00	0.0000
SPR-30134-004	SPARE REGISTER 004 30134	A	004	30134	->DCS	808	1.00	0.0000
1FGIDFVIYG2	ID FAN INBOARD BEARING Y VIB	A	004	30135	->DCS	809	1.00	0.0000
1FGIDFVOXG2	ID FAN OUTBOARD BEARING X VIB	A	004	30149	->DCS	810	1.00	0.0000
SPR-30150-004	SPARE REGISTER 004 30150	A	004	30150	->DCS	811	1.00	0.0000
1FGIDFVOYG2	ID FAN OUTBOARD BEARING Y VIB	A	004	30151	->DCS	812	1.00	0.0000
1CNCNDSPAVP1G2	CONDENSATE PUMP 1A PROBE 1 VIB	A	004	30165	->DCS	813	1.00	0.0000
1CNCNDSPAVP2G2	CONDENSATE PUMP 1A PROBE 2 VIB	A	004	30166	->DCS	814	1.00	0.0000
1CNCNDSPBVP1G2	CONDENSATE PUMP 1B PROBE 1 VIB	A	004	30181	->DCS	815	1.00	0.0000
1CNCNDSPBVP2G2	CONDENSATE PUMP 1B PROBE 2 VIB	A	004	30182	->DCS	816	1.00	0.0000
PLC_STATUS_004	PLC STATUS 004	A	004	30999	->DCS	817	1.00	0.0000

114-13



Symphony Plus HMI 'A' Server
(Dell Poweredge R710 Server)

Symphony Plus HMI 'B' Server
(Dell Poweredge R710 Server)



LAN Switches
(Dell PowerConnect 2824 (x2))

OPC Server
(Dell Precision T3500 w/ Windows 7 OS)

Ethernet

Ethernet

Ethernet